

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

I.—A CLASSIFICATION OF FEELINGS.

By CHARLES MERCIER, M.B.

I.

OF the various methods of classifying the Feelings that have from time to time been proposed, the majority were originated while the science of psychology was as yet without form and void, and, being therefore out of harmony with the discoveries and developments since attained, they may for the present purpose be disregarded. Recent as is the philosophical work of Sir W. Hamilton, his outline of a classification is wholly obsolete, not more, however, from the advance that has since taken place in our knowledge than from the slight elaboration that he bestowed upon it. Crude as it is, however, his system is remarkable, and in my opinion chiefly meritorious, for the recognition, vague indeed and rather implied than expressed, of the necessity of taking account of circumstances external to the organism in defining and estimating the feelings. Subsequent attempts at classification, including that of Waitz, the intricate and minutely elaborated system of Wundt, and even the more recent effort of Mr. Shadworth H. Hodgson, all appear to me so utterly wanting in the first and most elementary condition of a

classification—the condition, namely, that the groups shall mutually exclude one another—as to carry within themselves their own condemnation.

Adopting, as I do, Mr. H. Spencer's *Principles of Psychology* as a profound and masterly exposition of the origin and nature of the normal mind, I must yet dissent from his classification of feelings, on the same ground as I dissented from his similarly-founded classification of cognitions (MIND XXX. 260); and in the former case my disagreement with Mr. Spencer is much more complete and thorough than in the latter. In the classification of cognitions, while dividing the primary groups upon another principle, I was able to accept the degree of representativeness as demarcating the secondary groups from one another; but in the case of the feelings, this principle appears to me altogether inappropriate as a basis of classifying even the minor clusters. Without denying that the classification of feelings according to their degree of representativeness indicates in a vague and general manner certain real differences of composition, it yet appears to me, not only that the arrangement so made is too vague to be of any real service—not only that it fails to discriminate between widely-unlike feelings and fails to group together feelings that are closely allied—but that it is founded on a basis which totally ignores a fundamental principle of Mr. Spencer's own system of psychology. That the principle of representativeness permeates every feeling and varies in each class of feelings, I freely admit; but it does not therefore follow that it forms an adequate basis for classification, any more than it follows that the variations in character of the vessels of a tree form an adequate basis of classifying its parts, because they permeate throughout and vary in each part. That Mr. Spencer's groups "are but indefinitely distinguishable" he candidly admits, and this indefiniteness would by no means of itself invalidate his arrangement, if it could be shown that the things he classifies are correspondingly indefinite in their limitation. But are they? Is the feeling of Anger so indefinitely distinguishable from the feeling of Love; the feeling of Terror so indefinitely distinguishable from the feeling of Triumph; the feeling of Blueness from that of Warmth;—the feeling of Beauty from that of Indignation;—that they must all be accumulated together within the same class, and no attempt be made to regroup them in minor clusters within the class? So startling a result may well arouse suspicion that Mr. Spencer's classification is invalid—a suspicion which develops into assurance when the investigation is pressed home, and when the consequences

and implications are brought out in detail. The classification proposed by Mr. Spencer (ii. 514) is as follows:—

"Presentative feelings, ordinarily called sensations, are those mental states in which, instead of regarding a corporeal impression as of this or that kind, or as located here or there, we contemplate it in itself as pleasure or pain : as when inhaling a perfume.

"Presentative-representative feelings, embracing a great part of what we commonly call emotions, are those in which a sensation, or group of sensations, or group of sensations and ideas, arouses a vast aggregation of represented sensations ; partly of individual experience, but chiefly deeper than individual experience, and, consequently, indefinite. The emotion of terror may serve as an example. Along with certain impressions made on the eyes or ears, or both, are recalled into consciousness many of the pains to which such impressions have before been the antecedents ; and when the relation between such impressions and such pains has been habitual in the race, the definite ideas of the pains which individual experience has given, are accompanied by the indefinite pains that result from inherited experience—vague feelings which we may call organic representations.

"Representative feelings, comprehending the ideas of the feelings above classed, when they are called up apart from the appropriate external excitements. The feelings so represented may either be simple ones of the kinds first named, as tastes, colours, sounds, &c. ; or they may be involved ones of the kinds last named. Instances of these are the feelings with which the descriptive poet writes, and which are aroused in the minds of his readers."

So that, according to this classification, feelings so different as those of Anger, Love, Beauty, Contempt, Perplexity, and Fear—all of them feelings "in which a sensation or group of sensations, or group of sensations and ideas, arouses a vast aggregation of represented sensations"—belong to the same class—that of Presentative-representative feelings. Feelings so different as Blueness, Triumph, Saltiness, Hatred and Hardness, if remembered, and not called up by any appropriate external excitement, belong to the same class—that of Representative feelings. But a feeling of Anger arising in the presence of a detested person, and the same feeling arising from the remembrance of him, are classed in separate groups—the one is a Representative feeling, the other is Presentative-representative.

Mr. Spencer finally includes under the head of

"Re-representative feelings . . . those more complex sentient states that are less the direct results of external excitements than the indirect or reflex results of them. The love of property is a feeling of this kind. It is awakened not by the presence of any special object, but by ownable objects at large ; and it is not from the mere presence of such objects, but from a certain ideal relation to them, that it arises. It consists, not of the represented advantages of possessing this or that, but of the represented advantages of possession in general—is not made up of certain concrete representations, but of the abstracts of many concrete representations ; and so is re-representative."

This group is then a higher group than any of the preceding, and includes feelings of a different class, excluding of course the feelings belonging to the groups below. But the description that Mr. Spencer gives of the constitution of these feelings is exactly applicable to some at least of the feelings in the inferior classes. To guard against any possibility of misrepresenting Mr. Spencer, I will take his own example of the Presentative-representative class—the emotion of Terror—and ask if his description of a Re-representative emotion is not strictly applicable to it.

When a child enters a dark room alone, is it not a fact that the terror which it feels is “awakened not by the presence of any special object but by terrifying objects at large”? Is it not true that “it is not from the mere presence of such objects, but from a certain ideal relation [of accessibility] to them that” the terror arises? Does not the terror consist, not of the represented injury inflicted by this or that, but of the represented feelings of injury in general; is it not made up, not of certain concrete representations, but of the abstracts of many concrete representations; and is it not so re-representative? If this is a true description of the constitution of the feeling of terror, and it is difficult to perceive a flaw in it, what becomes of the distinction drawn by Mr. Spencer between feelings of the Presentative-representative class, and those which are Re-representative? And if, on the other hand, it is not a correct description, yet it must be acknowledged to be so close an approximation, that a classification whose primary groups are divided by such subtle differences is for practical purposes unworkable. While, therefore, as already admitted, the principle of representation, in common with the quality of pleasure or pain, does no doubt indicate an actual element which pervades every class of feeling and varies in each, yet the classification founded on it fails at every point at which it is brought to the test; and this collapse of the classification is sufficient proof of the inadequacy of the principle on which it is founded.

The impracticable character of Mr. Spencer's classification of feelings seems to me, however, to be the most cogent evidence of the truth and of the value of his system of psychology; for it demonstrates that when that system is departed from, not even Mr. Spencer himself can succeed in constructing a stable edifice on any other foundation. The classification that he has raised with such care is built upon sand, and falls to pieces before the first gust of criticism. It is true that his classification of feelings, unlike his classi-

fication of cognitions, is not opposed to any definite statement that he has made with regard to them; but this is because he gives no direct exposition of the nature of feeling. He does not specifically state of Feeling, as he states of Intelligence, that it is a feature in, or a portion of, the correspondence between the organism and its environment. He does, however, allege that "the several grades of mind and its component faculties are phases in the correspondence and factors of the correspondence," and again he speaks of "all mental phenomena" as incidents in the correspondence—expressions which must be held to include feelings. Apart however from any formal admission, no one who is familiar with Mr. Spencer's *Principles of Psychology* can doubt for a moment that Feeling as well as Intelligence is to be considered as "a phase in, or a factor of, the correspondence" between the organism and its environment. If Feeling and Thought grow from a common root and are inseparably involved, as Mr. Spencer shows them to be; and if in their development they become more and more closely interconnected, until at last they are well-nigh indistinguishable, as may be maintained; and if Intelligence, one of these two co-ordinate factors, is expressible in terms of the correspondence between the organism and its environment, then Feeling, the other co-ordinate factor, *must* be similarly expressible. If Life in general, and if Mental Life in particular, can be expressed in terms of the correspondence, then, since the whole includes the part, each and every factor of Mental Life can be so expressed. That one such factor can be so expressed, Mr. Spencer argues at great length and with irresistible force. That the other factor can be similarly expressed is my contention.

Mr. Spencer's treatment of this subject is the more remarkable, since Prof. Bain had already published an arrangement of feelings, in which, without any acceptance of Mr. Spencer's views, he yet formally takes account of external circumstances, not indeed in a definition or enunciation of feeling, but as determining the arrangement of feelings. So that we have this remarkable state of things—that Mr. Spencer, the chief exponent of a Realism, which, if "transfigured," is rather more than less stringent and widely applicable than the old Realism, classifies feelings from a standpoint mainly subjective; while Prof. Bain, who repudiates Mr. Spencer's system, is driven by stress of logical emergency to adopt in practice his fundamental principle, and to arrange the feelings with reference to the external circumstances with which they correspond.

While the merit of abandoning the subjective standpoint and of classifying the feelings with some reference to external circumstances, belongs unquestionably to Prof. Bain, yet he admits these circumstances not so much as a fundamental factor of classification as for incidental and collateral purposes, and his classification makes no attempt at detailed completeness. With his customary philosophical candour, Prof. Bain admits the imperfection of his arrangement, and goes on to express the opinion that the difficulty of expounding the Emotions in a strict order of sequence is permanent and insuperable. "Begin where we will," he says, "as we can only take one source at a time, we must anticipate what is to follow. The only thing to be done is to recognise the fact, and also its consequence, namely, that there is no one absolutely preferable arrangement." In so far as this conclusion refers to an arrangement in serial order, it is no doubt necessary and inevitable. But what is the obvious implication? That since a serial arrangement is impossible therefore no arrangement is possible? Surely not. Two generations ago, the same permanent and insuperable difficulty was experienced, by the botanists and by the zoologists of that day, in the serial arrangement of vegetable and animal forms. So long as they stood still and kicked against the pricks, so long did science stand still with them, and when the impracticable character of such an arrangement was recognised and admitted, the first step was taken in the circumvention of the difficulty and towards a classification, non-serial indeed, but based upon fundamental likeness and differences, and in accordance with genealogical affinities. And similarly we may hope, nay, we may sanguinely expect, that the recognition, thus formally declared by Prof. Bain, of the impossibility of arranging the feelings in linear sequence, heralds the abandonment of all attempt at such an arrangement, and the construction of a classification according to those fundamental properties which they have acquired from the source and in the process of their development. That such a classification alone can express the true relations of the feelings to one another, is demonstrated by reason and enforced by analogy; and that our knowledge is ripe for the attempt is sufficiently indicated by Prof. Bain's declaration.

From what has been said it will be already apparent, that the classification of feelings that is here proposed, is founded, not on any distinctions between the qualities of feelings as subjectively viewed—an aspect to which belong such distinctions as those between Appetites, Desires, and Affections

(Reid); as that between the Subsidiary Faculties and the Elaborative Faculty (Sir W. Hamilton); that between Sensual Feeling and Intellectual Feeling (Kant); that between Harmony and Conflict (Herbart); that between Formal Feelings and Qualitative Feelings (Waitz); those between Affections, Moods, and Passions (Wundt); those between Direct, Reflective, and Imaginative Emotions (Hodgson); and it may be added, that between Representative and Re-representative Feelings;—but is based, like the classification of Cognitions previously proposed, on variations of the correspondence between the organism and its environment; of which correspondence Feeling is a cardinal factor.

The term Feeling, like the term Cognition and several other terms used in psychology, is used in two distinct senses. It is used to express a process, and also to express the result of that process. Just as Cognition may mean either the process or act of cognising or the state of mind remaining on the completion of this act, so may Feeling be understood either as the process of feeling or the state of mind resulting from the process. It is in the latter sense that the term will be most used here, and the context will show clearly when the other meaning is implied.

Expressed in terms of the correspondence, the process of Feeling is the correspondence of states in the organism with interactions between the organism and the environment; and the states so corresponding are the individual Feelings. The correctness of this expression I must ask the reader to take upon trust for the present. If he will accept it provisionally for the sake of convenience, I shall hope eventually to secure his permanent adhesion, but the arguments and evidence necessary to establish it are far too extensive to be introduced parenthetically in this place, and will require separate treatment. Evidence that the expression is imperfect will arise at once, but the same evidence will indicate the qualifications that must be attached to it, and when they are added it will be found, I believe, to cover the facts with as much accuracy as our language admits of.

If Feeling is the state in the organism which corresponds with an interaction between the organism and the environment, then Feeling must vary as this interaction varies, and it must be possible to obtain a classification of feelings from a classification of the actions.

If we take this principle as a basis of classification and apply it to Feeling as a whole, planes of cleavage start to view, separating the mass into divisions and subdivisions that appear so coherent internally, and so clearly demarcated

externally, as to present a strong *prima facie* claim for consideration.

Now, what is the most fundamental division that can be made among interactions in general, as occurring between two agents? Manifestly that according to the way they are begun. Such an action may be begun by one agent, or by the other, or by both together; and manifestly the way in which it was begun will affect and modify the whole of the remainder of the action. An interaction between the organism and the environment may be initiated by the environment, or by the organism, or simultaneously by both, and the corresponding feelings will fall naturally into three great orders. Feelings of the first order have their root in the sensation of Touch, and its extension Pressure, which corresponds with the most fundamental action of the environment on the organism—the action of mechanical contact. Feelings of the second order have their root in the sensation of Effort, which corresponds with muscular movement—the fundamental form of all actions of the organism on the environment. Feelings of the third order have their root in Resistance, which is manifestly a combination of the other two. While therefore this feeling, as it partakes of the nature of the other two, approaches nearer to both of them than either of them does to the other, yet, inasmuch as it is compound, it differs more widely from them both than they do from each other. What is the nature of this difference? A feeling of Touch and a feeling of Effort do not necessarily combine into a feeling of Resistance when experienced together, as may be seen when the touch refers to one part of the organism and the effort to another. What then is it that the sensation of Resistance corresponds with? It is the *relation* that the two factors in the interaction bear to one another—the relation of the muscular strain to the pressure, or in subjective terms, the sensation of Resistance is the relation of the sensation of Effort to that of Touch or Pressure. But a relation between two feelings is a cognition. Ought we not then to speak of Resistance not as a feeling but as a cognition, seeing that it is a relation between feelings, and corresponds with a relation—that of co-existence between extension and body—in the environment? Whether we so regard it depends entirely upon the aspect from which we look at it. Undoubtedly the state of mind called Resistance is a relation between two feelings, and is therefore, from one aspect, a cognition; but, as Mr. Spencer points out with great clearness, a relation between feelings is *itself a kind of feeling*—the momentary feeling accompanying the

transition from one conspicuous feeling to an adjacent conspicuous feeling, and therefore imperatively demands a place in a classification of feelings. The fact that the scheme here set forth necessitates an inclusion of cognitions in the classification of the feelings, so far from militating against it, is actually evidence in its favour. The great difference between feelings and relations between feelings when subjectively viewed is the duration; and I have already shown how, as cognitions become more and more complex, they become more prolonged, so that while every cognition is in one aspect a feeling, this aspect becomes more and more conspicuous as cognition becomes developed. Hence there is the more reason for indicating the position that such feelings occupy at the root of the classification.

The way in which an interaction is initiated, as it is a necessary element in all interactions whatever, is *a fortiori* a necessary element in all interactions between the organism and its environment; and every group of interactions that is constituted on any other principle must necessarily be susceptible of division according to the way it is begun. There is, however, a set of divisions of very different character, which, although they are applicable only to the special group of interactions with which we are now concerned—those between the organism and its environment—are based on a principle that, in reference to these interactions, is of primary importance. They are based on the principle of Evolution.

To announce to a botanist or a zoologist that the classification of plants or of animals ought to conform to their genealogical kinships, and therefore to harmonise with and illustrate the principle of Evolution, would be as idle and superfluous as to persuade an astronomer of the truth of the law of Gravitation. The matter has passed out of the region of discussion. It has become an accepted doctrine—a truism. The great majority of modern psychologists admit that the human organism has come into existence and reached its present condition by a similar process of evolution, and that by this process has originated and developed not only the physical organism but the mind also. Those who admit the development of mind by evolution, should therefore not need, any more than the botanist or the zoologist, a laboured demonstration that the states resulting from this process should be classified in accordance with it. For those who do not admit that the principle of evolution applies to mental phenomena, this paper is not intended. It does not appeal to them; it has no claim to their con-

sideration. But those who do admit the application of evolution to this region of being are committed beforehand to an approval of the basis of my classification. That the details or even the grosser structure are correctly worked out is not claimed, is perhaps not even probable; but it is claimed that evolutionists are logically bound to accept the principle of the classification, and that the burden of disproof lies with those who reject it.

In the classification of animals and plants, the primary divisions are marked out by differences in some fundamental attribute—by the mode of germination in the one case, and by the presence or absence of organs of profound importance, as limbs, bloodvessels, and nervous system, in the other. The division of the primary into secondary groups follows the variation of some attribute of the primary group that is not only of secondary importance, but is, or may be wholly wanting in the other primary groups. The phanerogamic plants, for instance, are divided according as their seed possesses one or more cotyledons—organs that have no existence outside this group. The dicotyledonous plants are classified according to the number of their petals—organs that no other kind of plants possess. The sub-orders of the leguminosæ are determined by variations in the characters of the pod—a form of fruit that is confined to this order. And the classification of animals proceeds in the same way. The inference is obvious. If the feelings have come into existence by the same process of evolution to which plants and animals owe their origin, and if the classification of the latter, following the lines of this process, exhibits certain characters, then it may be expected that the classification of the former, following the same process, will exhibit similar characters. When it is found that the mode of classifying the feelings that is here proposed does exhibit a well-marked similarity to the accepted mode of classifying animals and plants, it may be claimed as an additional indication that the principle on which it is founded is correct.

It may be objected that we have now got two principles of classification, one according to the way the interaction is begun, the other according to its position in the evolutionary scale, and that these two principles are so widely different that the lines of division that they regulate cannot possibly coincide with or even approximate to each other; and this must be admitted, but it does not invalidate the classification. A classification which follows the course of evolution is often and very aptly compared to the structure of a tree. It may be said that a tree forms a solid diagram of such a classifica-

tion—a diagram in three dimensions. The most general and least differentiated forms are represented by the stem of the tree, and the more elaborate and special forms by the successively diminishing branches. Such a diagram represents accurately the classification of feelings according to the principle of evolution. The other principle of division—that according to the way in which the action is begun—runs, as I have said, through every branch of feeling that is constituted on any other principle, but it does not necessarily destroy the other mode of classification. It may be represented on our diagram by the difference between the bark and the wood—a difference that is perceptible no less in the extremest branches than in the trunk, a difference that permeates throughout and yet leaves the other method of division absolutely unaffected. The analogy may be stretched much further without breaking. For just as the arborescent form is peculiar to the tree, so the division of interactions according to the principle of evolution is peculiar to the interactions between organisms and their environments; and as the division between cortex and interior is common to the tree and all other bodies that are acted on from without, so the division between interactions that are internally initiated and those that are externally initiated is common to all interactions whatever. The parallel may be carried even further. The description of the tree is not completed by the consideration of the parts that are above ground only. There yet remains the root, a part that ramifies in a different direction and in a different manner, and is not open to direct observation. Similarly there is a body of feelings—those constituting the Cœnæsthesis, or the Visceral or Organic Sensations—which correspond with interactions occurring within the organism, and these interactions are not open to direct observation, are connected with the other interactions and are yet distinct from them, and are divisible upon a different method.

There is yet a third general principle in accordance with which feelings may be divided. This is the directness or indirectness of their correspondence with interaction, and, in the latter case, the degree of remoteness from direct correspondence. Feelings which correspond directly with an interaction between the organism and its environment are termed Sensations; those which correspond indirectly are termed Emotions; and when the remoteness from direct correspondence is great, the feeling is in some cases termed a Sentiment. When the correspondence is indirect it would usually be correct to say that the feeling corresponds with a

relation between the organism and the environment, and this mode of expression will often be used hereafter, but it must be borne in mind that the relation is always a relation of interaction, past, future, or possible, and that it is this element of activity that alone arouses feeling. The feelings of cognition, for instance, which have already been referred to, may properly be regarded as the state in the organism which corresponds with the relation between two such interactions.

Considered in the light of the principle of Evolution, there are two classes of interactions between the organism and the environment which stand out pre-eminently before all others in their importance and in their antiquity. These are the interactions which primarily affect the conservation of the organism, and those which primarily affect the perpetuation of the race. Of course every interaction between the organism and the environment must necessarily affect to some extent, however slightly, its conservation, and must affect in some degree, however remote, its ability or tendency to perpetuate the race; but we speak here of interactions only as they primarily subserve or oppose these two great ends. Compared with the interactions that affect these two great and primordial ends all others are but of yesterday, although even the following group dates from a period long prior to that at which the race attained to the dignity of humanity. There is little doubt that, long before our ancestors had reached the organisation and status of Man, they lived gregariously, so that for a period which may not include a large section of the whole life of the race, but which is intrinsically very great, each individual organism has been subject, as a member of a community, to a number of interactions affecting the common welfare; of which some are concerned with the environment of the community, and others are concerned with the community itself, regarded as a special (the social) environment of the individual. From interactions that concern the welfare of the organism in common with that of other individuals to those that concern other individuals only is not a long step; and through this class of interactions we pass to those that are neither conservative nor destructive, a somewhat heterogeneous group, comprising all the residue of interactions that are not included in previous classes. Finally there is a class of feelings—the feelings of Cognition—which correspond with a relation between interactions. Classed upon this method, the main groups of feeling will therefore be six in number,

corresponding with the main classes of interactions with the environment of which the organism is capable, *viz.* :—

- CLASS I. Those which primarily affect the conservation of the organism ;
- CLASS II. Those which primarily affect the perpetuation of the race ;
- CLASS III. Those which primarily affect the common welfare ;
- CLASS IV. Those which primarily affect the welfare of others ;
- CLASS V. Those which are neither conservative nor destructive ; and
- CLASS VI. Feelings corresponding with relations between interactions.

CLASS I.—The first great group of feelings, including *those that correspond with interactions that primarily subserve or oppose the conservation of the organism*, subdivides into two secondary groups, characterised by the way in which the interaction begins. One of the Sub-classes of feelings corresponds with actions that are initiated by the environment, the other corresponds with actions that are initiated by the organism. Each of the secondary groups thus formed is again divided according to the third of the principles already set forth—the directness or indirectness of the correspondence—into two tertiary groups, which we may term Orders. So that of the first great class of feelings four well characterised divisions present themselves for examination. These we may now take in detail, *seriatim*.

Sub-class I. *Feelings that correspond with interactions primarily affecting the conservation of the organism which are initiated by the environment.*

Order I. *The correspondence is direct.*

When thermal undulations impinge upon the surface of the organism ; when a body comes in contact with the skin ; when a chemical change takes place in a mucous membrane ; when sonorous undulations strike upon the tympanum, or etherial undulations on the retina,—in such cases a feeling arises which corresponds directly in duration, in intensity and in volume with the action of the environment on the organism, and such feelings are termed Sensations. Sensations are to a large extent unconditional. If the action takes place the feeling necessarily arises, the bodily structure being supposed normal. The action taking place on what is physiologically the surface of the organism, there is a minimum of opportunity for the introduction of the intellectual element, intelligence arising only when the correspondence between the organism and the environment begins to extend in space. Whatever part cognition plays in the process is therefore subordinate. Feelings of this simple character can exist in the absence of almost every trace of cognition, and where cognition exists, it is in every case secondary to the feeling. These relations to cognition hold

true when the feeling is represented as well as when it is presented. In the next order of feelings, in which the correspondence is indirect, we shall find that cognition rises into a position of much greater importance.

Environmentally-initiated Sensations are classified according to the nature of the agent by which they are aroused, as follows:—

TABLE I.

CLASS I. Sub-class I. Order I.

Self-conservative Environmentally-initiated Sensations.

The agent is

Thermal vibration	{ of plus quantity, or more ample than that in the organism of minus quantity, or less ample than that in the organism }	Warmth.
		Cold.
Mechanical force	{ of inappreciable magnitude of appreciable magnitude }	Touch.
		Pressure.
Chemical rearrangement	{ on the surface within the surface }	Smell.
		Taste.
Aerial undulation	{ irregular rhythmical }	Noise.
		Sound.
Etherial undulation	{ of which variations in amplitude correspond with variations in of which variations in rapidity correspond with variations in }	Light.
		Colour.

Little comment is, I think, required upon the above table. Objection may be taken to the expression "inappreciable magnitude" as applied to the mechanical agent with which the feeling of Touch corresponds, for it may be said that if the touch is felt, the force is *ipso facto* appreciated; but I know not how otherwise to express the fact that the feeling of Touch proper depends upon mere contact—upon the application of a force so small as to be virtually unmeasurable. If this term were substituted, an analogous objection might still be offered, for it might be said that the force exerted, for instance by the friction of a hair upon the skin, could be measured by a sufficiently delicate apparatus. The distinction that I have drawn between the action that provokes Taste and that which provokes Smell is not a recognised distinction, but from the following considerations it appears valid. That the processes that give rise to Taste and Smell are closely similar, if not the same, is indicated by the familiar fact that when smell is lost taste is greatly

diminished. Smell arises much more rapidly than taste. Unless the sapid substance is unusually pungent or in strong solution, there is not usually any feeling of taste until it has been for some moments in the mouth. Often there is a very distinct interval before taste begins. It is difficult to see any adequate cause for this delay other than the necessity of the sapid substance to penetrate through a certain thickness of tissue before it can reach the nerves of taste; and this penetration or soaking of course requires time. No such delay occurs in the case of smell. In children, in whom the mucous membrane of the mouth is thinner than it is in adults, the feeling of taste arises much more readily, but no such difference exists in the case of smell. The pure tastes—of sweetness, sourness, and bitterness, depend on the action of crystallisable substances, that is, of substances whose distinguishing physical property is the readiness with which they pass through organic membranes. No such peculiarity characterises the bodies that elicit the sense of smell.

Order II. *The correspondence is indirect.*

The second order of environmentally-initiated feelings is that in which the state in the organism which we call feeling corresponds, not with the actual operation of an agent upon the surface of the organism, but with the relation which some circumstance in the environment bears to the organism. The action of the environment on the organism with which the feeling indirectly corresponds being not actual, but removed to a distance in time and space, there can arise in the organism no state answering to such action except by the extension of the correspondence in time and space, and this correspondence is intelligence. If the agent is not directly acting upon the organism, but the feeling corresponds with the relation in which the agent stands to the organism, then for the feeling to arise this relation must first be known. As far as concerns any effect upon the organism, an unperceived relation is nothing. Hence, of feelings of this order cognition forms a part; a subordinate part indeed, but one of integral and even antecedent necessity. So far from being, like feelings of the previous order, unconditional, they are absolutely conditional on a previous process of cognition. A difference in the subjective aspect of the two orders of feelings is also important. The Sensations that have been considered have no inherent quality of pleasurable or painfulness. Each may be pleasurable under some circumstances, painful under others. The quality of the feeling, when it exists, corres-

ponds not with the nature of the action, but with its degree. A small increase of warmth or coldness is not necessarily either pleasurable or painful. When the degree of change becomes considerable, some degree of pleasure or pain commonly accompanies it. When the change is great there is always pain. The same is true of pressure, of light, and of sound. A small degree of either of these actions is not necessarily either pleasurable or painful. A great increase in the amount of any of these actions is always painful. But in the feelings now to be considered, termed *Emotions*, the pleasurable or painful quality is not dependent upon the amount of the action, for direct action there is none. The quality of the feeling depends upon an attribute of the circumstance with which the feeling corresponds; and when this attribute is present, however trifling the amount of the feeling, it has a definite quality. When the circumstance is noxious, the corresponding feeling is painful. When the circumstance is beneficent the feeling is pleasurable. It is evident, therefore, that the quality of the circumstance supplies us with a means of dividing into subordinate groups the present class of feelings. Previous, however, to this classification according to the quality of the circumstance, a more important division has to be made depending on its nature. The circumstance in the environment which elicits the feeling may be either a state or a process—either an agent or an event,—and the feelings aroused exhibit a corresponding variation.

TABLE II.

CLASS I. Sub-class I. Order II.

Self-conservative Environmentally-initiated Emotions.

The feeling corresponds with the relation to the organism of	{	an Agent in the environment which is cognised as	{	actively noxious	Antagonistic Feelings. Feelings of Repugnance. Kindly Feelings.
			{	passively noxious	
				beneficent	
	{	an Event in the environment which is cognised as	{	noxious	Grievous Feelings. Joyous Feelings.
			{	beneficent	

The Antagonistic feelings and the feelings of Repugnance, which have a close affinity, might be grouped together under the name of Antipathetic feelings.

The first of the five groups thus arrived at is the large and important genus of Antagonistic feelings. The feelings belonging to this genus are more numerous, more strongly and distinctly characterised, than those of any other group

of corresponding value, and the reason is not far to seek. If the feelings correspond with the interactions between the organism and its environment, and if they have come into existence by a slow process of evolution extending from the dawn of life down to the present time, then the largest and most important group of feelings will be that which corresponds with that group of interactions which in the history of the race have been most numerous and most important. To which interactions this description applies there can scarcely be two opinions. Man, like every other organism, has arrived at his present state of development by the survival of the fittest in a ceaseless struggle for existence that has been in progress for countless myriads of years. During all this incalculable time the circumstance that has been most potent in shaping his organisation, has been the pruning and moulding influence of the adverse conditions against which he has had to struggle; in other words the action of noxious agents in the environment. From this consideration we might predict that the group of feelings corresponding with the action of such agents must be the most important group of the environmentally-initiated Emotions, and when we find that it is so, we may fairly regard the fact as tending to corroborate the naturalness of the classification.

The most fundamental division that can be made of agents of this class refers, it is manifest, to the magnitude of their power with respect to that of the organism. No quality of a noxious agent can be of such importance, or exert so much influence on the state of the organism produced by its proximity, as the relative powers of this agent and of the organism. Since, as has already been pointed out, in feelings of this class the agent is not actually acting upon the organism, but is separated from it by an interval in time and space, it is clear that not only must cognition of the agent precede the occurrence of any feeling, not only must cognition of its noxiousness precede the occurrence of any Antagonistic feeling, but a cognition of the relative power of the agent is also necessary before a feeling of any definiteness can exist. Furthermore, just as the quality of the feeling as Antagonistic depends, not upon the attribute of the agent as it actually exists, but upon its attribute as cognised—a cognition which may be widely discrepant from the truth; so the sub-group, or sub-genus of antagonisms into which the feeling will fall will depend, not on the actual relation which the power of the agent bears to that of the organism, but on the relation that is cognised. To take an

example: the feeling of Terror which, I say, arises on the cognition of the accessibility of the organism to a noxious agent of overwhelming power, will not arise unless the accessibility is cognised, nor unless the noxiousness is cognised. But this is not all. Cognition of these relations will determine the arousal of some Antagonistic feeling, but for this feeling to assume the gravity of Terror a further cognition must be added. The power of the agent must be cognised as overwhelming. The concurrence of these three cognitions is a necessary prerequisite to the feeling of Terror. To descend still further into particulars, and to take a case the most unfavourable to the doctrine here advanced: A woman goes into a paroxysm of terror at the sight of a mouse. How are the conditions satisfied in such a case? That the cognition of accessibility is a condition of the feeling is seen in the fact that if the mouse is encaged terror is not felt; or if felt, the chance that "it may get out" is assigned as a reason. That the mouse is believed to be noxious, and that in a high degree, is sufficiently evident. Doubtless, cross-examination might not elicit any precise form of injury to be feared, that is to say, the cognition is not necessarily definite, but its vagueness is sufficiently compensated by its strength, which no amount of argument can overcome. So far the conditions are satisfied, but is the power of the mouse cognised as overwhelming? If not, the scheme falls to the ground; and at first sight it seems very difficult to say that it is. Of course, as far as mere mechanical strength is concerned the supposition cannot be entertained, the comparison is absurd. But the word "power," as used here, includes far more than this. It means capacity of doing injury, which includes the element of unavoidableness. However overwhelming may be the mere mechanical strength of the agent, yet if it is easily escaped, its capability of inflicting injury is limited; and on the other hand, the agent may be weak to insignificance in mere mechanical strength, and yet have other sources of power which render it in the highest degree formidable. Such an agent is a venomous snake; and when it is remembered that the terror inspired by such an agent will be greater the less the means of defence, the smaller the opportunity of escape, and the more rapid the movements of the snake, it becomes apparent that the power spoken of is not necessarily mechanical energy but power to injure, and includes as part of that power the element of unpreventableness or inescapableness. The whole of the qualities may be summed up as degree of noxiousness. Now let us return to the case of the mouse, and observe that,

while its power of inflicting harm, should it gain access to the organism, is cognised very indefinitely but still very vividly as considerable, the astonishing rapidity of its movements proves it to possess a power of gaining access to the beholder which is far beyond her ability to prevent or avoid; and thus the degree of noxiousness, which may be regarded as the product of these two factors, is maintained at a very high estimate by the magnitude of the one factor, notwithstanding the moderate value to be attached to the other. As thus defined, the power of the agent is cognised as overwhelming compared with that of the organism, and the doctrine holds good.

Take another instance of the feeling of Terror—the feeling experienced by a child on entering a dark room. There is nothing in the room that can harm the child—no agent in the environment to arouse the feeling. Can the formula be said to apply to such a case? Assuredly it can. True, the room is in reality empty of ought but harmless furniture, but it is peopled thick with terrible things by the child's imagination; and it is the agent that is cognised, not the agent that actually exists, that arouses the feeling. Moreover the child's accessibility to the agents is cognised as a maximum. It cannot see, but it imagines itself as seen, and in comparison with its own helplessness to avoid its unseen foes, their power is conceived as overwhelming.

The relative power of the noxious agent to inflict injury, in comparison with that of the organism to avoid it or to nullify it by counteraction, is of course not precisely measurable. Nor is precise measurement any condition of the feeling. Between agents that, in comparison with the organism are overwhelmingly powerful, and those whose power is by the same standard insignificant, there is an infinite number of degrees, and although the power of any given agent can never be precisely estimated, it is assigned to some more or less definite position in the scale, and the feeling that it arouses occupies a corresponding position. The scale may be broadly divided into five regions. There are agents whose power to inflict harm is cognised as approximately equal to the power of the organism to avoid or counteract them. Above these are those agents whose power is cognised as superior to that of the organism; which again admit of division according as the superiority of their power is cognised as moderate or as altogether overwhelming. Below the middle point of the scale are those agents whose power is cognised as inferior to that of the organism, and these again are redivided according as they are moderately inferior or insignificant. With these five degrees of difference

in the comparative power of the noxious agent correspond five groups of Antagonistic feelings.

The inferior groups and individual feelings are marked off from one another by minor differences in the nature of the interaction : by the presence or absence of counteraction on the part of the organism, by the form which this counteraction takes, and by its success or failure ; each of these differences in the interaction between the organism and its environment being paralleled by a corresponding difference in the feeling aroused. The detailed classification of the Antagonistic feelings is given in the annexed Table.

If the names of the feelings enumerated in the last column of this table are read in the order there given from above downward, it is at once evident that this is not the order of their affinity. The feelings of Terror and Fear which are so closely allied that they differ in degree only, are separated by feelings so widely different from either of them as Resignation, Desperation and Hope. Similarly the feelings of Revenge and Resentment, which have manifestly a close kinship are separated by feelings so alien from them as Patience and Suspicion. Stubbornness and Sulkiness are widely separated by the intervention of feelings so unlike them as those of Rage, Triumph, and Apprehension. It would be easy to bring these allied feelings together by shuffling the cards a little. If we transpose the second and third columns, and make the primary divisions according to the nature of the reaction and the secondary divisions according to the relative power of the agent, we bring together Terror and Fear, and follow them immediately by Hate, Annoyance and Contempt. Similarly, Resignation, Patience and Meekness would form a separate well-characterised group ; and other groups as natural would follow. But on the other hand by this arrangement Terror would be separated from Despair, Hate from Anger and Revenge, Annoyance from Vexation, and other closely allied feelings would have to be placed far asunder. From this it would appear that the classification here proposed is open to the same objection as those that I have rejected—of grouping together things that are widely unlike, and separating widely those that are closely allied. If my aim were to arrange the feelings serially, this objection would of course be valid, and the classification futile ; but I have already declared that this is not my aim. So far from it, indeed, I hold that, as Mr. Spencer asserts of the arrangement of animal forms, “such relations cannot be represented in space of two dimensions [even] ; but only in space of three dimensions”. In a diagram such as that afforded by the table, the serial

TABLE III.

Class I. Sub-class I. Order II. Genus 1: The Feelings of Antagonism.

The feeling corresponds with the relation to the organism to Agent in the environment which is cognised as actively noxious	and of overwhelming power	and does not elicit counteraction.	{ which is incipient, which is voluntarily suppressed.	{ and is successful.	{ Terror. Desperation. Resignation. Triumphant Exultation. Despair. Hope.
		but the cognition is uncertain.	which becomes actual	{ and is unsuccessful.	
	and of superior power	and does not elicit counteraction.	{ which is incipient, which is voluntarily suppressed.	{ and takes a passive form.	{ Fear. Courage. Patience. Stubbornness. Triumph. Defeat.
		but the cognition is uncertain.	which becomes actual	{ and is unsuccessful.	{ Apprehension.
	and of approximately equal power	and does not elicit counteraction.	{ which is incipient, which is delayed, which is voluntarily suppressed.	{ and takes a passive form, & of moderate intensity.	{ Hate. Anger. Revenge. Patience. Sulkiness. Rage. Fury.
		but the cognition is uncertain.	which becomes actual	{ and is successful.	{ Victory. Mortification. Suspicion.
		and does not elicit counteraction.	{ which is incipient, which is delayed, which is voluntarily checked.	{ and is unsuccessful.	{ Annoyance. Vexation. Resentment. Meekness. "Satisfaction of Success." Mortification. Contempt.
	and of inferior power	and elicits counteraction	which becomes actual	{ and is successful.	
	and of insignificant power	and does not elicit counteraction.			
		and elicits counteraction.			

arrangement distorts and dislocates the actual relations of the feelings somewhat as Mercator's projection distorts the relations of land and water on the surface of the earth. Mercator's projection seeks to represent on a plane surface the relations existing on a curved surface,—to reproduce in a diagram of two dimensions relations existing in space of two dimensions; yet how imperfect is the result! Judge, then, of the possibility of representing in space of one dimension relations that require three dimensions for their true exposition.

A fairly adequate concept of the inter-relations of the Antagonistic feelings may, however, be gained, if we conform to the necessary conditions. Let us imagine the most general of the relations that govern the classification of these feelings—the degree of noxiousness or the relative power of the noxious agent—to be represented by a solid stem; and let us suppose this stem to have five nodes, corresponding with the five relations that the cognised power of the noxious agent may bear to that of the organism; the node at the top representing those in which the power of the agent is insignificant and the node at the bottom those in which its power is overwhelming. At each of these nodes the corresponding group of feelings enumerated in the table may be represented as arranged round the stem in what is known to botanists as a whorl; each feeling being represented by a projection, separated from its adjoining fellows by a notch, which will be deeper or shallower according as the difference is more or less pronounced. Now, since there is no abrupt division between those agents that are approximately equal in power to the organism and those that are superior and inferior, nor is there any demarcation between these two groups and those which lie above and below them respectively, it follows that, to make the diagram correspond, we must imagine the projections that we have placed at the nodes to be extended up and down the stem as continuous buttresses, uniting the feeling placed at a node with the allied feelings at the nodes above and below on the same meridian of the stem. The notches will now become grooves and the stem a fluted column. Lastly, since those feelings which relate to an agent of greater power are of greater magnitude than those which relate to an agent of lesser power, they should be represented on our solid diagram by the greater size of the projections which correspond with them. The fluted column will thus become a fluted cone. At the base of the cone a great protuberance will represent the feeling of Terror, which is bounded by, and in some part continuous

with, the feelings of Desperation on the one side and of Despair on the other. When we follow this protuberance upward toward the apex of the cone, we find that it gradually merges into Fear, while its neighbours similarly graduate, the one into Courage, the other into Defeat. Followed still higher, Fear narrows first into Hatred, then through Dislike into Annoyance; Courage becomes first Anger and then Vexation; and Defeat becomes modified into Mortification of various degrees. If, instead of noticing the connexions among the feelings, we pay attention to the divisions between them, we find additional evidence that this solid diagram truly represents their relations to one another. For if the buttresses are large and prominent at the base and diminish towards the apex, it is but stating the same fact in another way to say that the divisions between them at the base are deep, and become more and more shallow as they run upwards, until at the apex they disappear. And if we turn from the diagram to the feelings whose relations it represents, we find that the differences between them have a corresponding disposition. Between the Despair that attends a failure to counteract the action of a noxious agent whose power is cognised as overwhelming, and the Triumphant Exultation that follows an unexpected success, the interval is as great as can possibly exist between feelings of the same genus. Between the Triumph that attends success over an agent previously cognised as superior, and the wretchedness of Defeat that attends failure of the counteraction, not only is the difference less than in the previous case, but other things being equal, it is less in exact proportion as the power of the agent is cognised as less overwhelming. When the agent is approximately equal in power the gap between the feeling aroused by success and that aroused by non-success, though still very considerable, is manifestly less. As the agent becomes less and less powerful, the interval between the two sets of feelings aroused by success and by non-success diminishes more and more, until as the agent becomes insignificant the feelings subside into a dead level of indifference. Again, the feeling of abject Terror that accompanies the absence of all effort to resist an overwhelmingly powerful enemy differs very widely from the feeling of Desperation that accompanies the strenuous effort to resist. Between Fear, the homologue of Terror, and Courage, the homologue of Desperation, the interval, though still great, is not so great. When we rise to the next "whorl" of feelings, in which the relative powers of the agent and the organism are cognised as approximately equal, the corresponding feelings of Hate and Anger are

still less widely different, and are shown to be so by the comparative ease with which the transition is made from the one to the other. In the succeeding group the feeling of Annoyance which accompanies passivity and that of Vexation which goes with active counteraction are so little different that the terms are often used interchangeably; and when the agent is insignificant the two feelings coalesce into the single state Contempt: of which Scorn is properly only the outward expression.

From these considerations it will, I think, appear that the similarity between the feelings of Hate, Anger, Revenge and Rage in the third group, and between those of Annoyance, Vexation and Resentment in the fourth, so far from telling against the validity of a classification in which they are differently described, actually tells in its favour. Furthermore, I trust that a claim has been made out, not only for the recognition of the Antagonistic feelings as a natural and well-characterised group, but also for the validity and correctness of some such internal structure of the group as that which I have proposed; an arrangement which displays the lateral and cross relations of the various feelings in the group as well as their more obvious kinships.

It will be seen that in the classification proposed each feeling has not only assigned to it a position, but also has its nature stated and defined. In doing so, as in all cases in which terms are taken from the vernacular and applied to the purposes of science, the meaning of the terms at the same time that it is rendered precise is necessarily somewhat altered. It is probable that in some cases a term has been used to connote a feeling not quite the same as that to which it is applied in common use. I can only say that I have tried to bring the expressions as nearly as possible into harmony with what appeared to be the commonly received meaning of the term used; and that, when I have thrust into a definite mould a term which as commonly used has but a hazy significance, I must ask the reader to accept the connotation that I attach to it so long as he is estimating the validity of the classification. Those terms which have in common use a distinct and well-defined meaning that is generally recognised, impose on me the burden of showing that the exposition that I have given of their character is in accordance with this usage. This duty I hope to discharge hereafter, but as it will involve an examination of the feelings one by one, which would not only be out of place in a Classification, but would treble the length of this communication, it must for the present be postponed.

(To be continued.)

II.—THE OBJECT OF KNOWLEDGE.

BY EDMUND MONTGOMERY.

I.

HAPPILY, investigators of mind are at present generally agreed that, in our philosophical inquiries, we have to start from the data of individual consciousness, as alone immediately cognisable. The question is: What underlies the wide-spread display and endless train of conscious occurrences that, for each of us, make up the world we know? And what is the real meaning of it all?

Genuine Transcendentalism answers: The essence of our being consists in a spiritual organisation or subject, autonomously weaving steady experience out of the ever-changing conscious phenomena; and it all means the more or less adequate understanding of that which eternally and unalterably subsists in a universal consciousness.

Genuine Naturalism answers: The true subject and bearer of the conscious display is that abiding something of ours, which we perceive as our living organisation; and its conscious affections signify to us the recognition of our own relations to the entire economy of sense-compelling influences which we call the world.

Could more diametrically opposite conceptions of human existence and its aims well be framed—psychologically, metaphysically, and ethically? Yet this is actually what we find ourselves driven to by the present developments of our philosophy. We have unambiguously to decide for one or the other of these extreme views. Consistent thinking can discover no compromise. Our being is either wholly natural, or wholly spiritual. It is either a purely intelligible principle, apprehending and elaborating the conscious phenomena and, consequently, in possession of all there is immediately extant. Or it is, on the contrary, that integral part of nature appearing to us as our living body, and experiencing our world of feeling and thought as affection of its own. It must certainly be either the one or the other. In no way can our veritable being be both together: a spiritual subject constituting experience by dint of its own power, and also an organic subject experiencing its naturally constituted functions. Experience is either exclusively organic, or exclusively hyper-organic.

But by what means does it anyhow become possible? The mental phenomena that make up our experience come to us as a broken sequence of more or less disconnected particulars. What then is the power in us that gathers up all these shifting and vanishing mental fragments, and constructs therefrom an enduring system of knowledge?

And, as knowledge surely means the recognition of a permanently and universally valid consistency of something besides ourselves, what is the true nature of the objective validity thus recognised in knowledge?

These, no doubt, are the main questions on which our controversy has to turn, and by which we shall have to test the respective merits of the two opposite modes of explanation.

First of all, it may be fully granted that there must be dwelling in existence a subject, not itself in its very being the mere succession of mental particulars, but somehow retaining the same as collected experience, and recognising it as such. Even Hume had to postulate some comparatively indelible subsistence in memory of the experienced impressions and their customary agglutinations. But it is quite impossible to imagine, or to conceive in any way, how the subject, which thus experiences by dint of memory or otherwise, can ever have itself resulted from a combination of the experienced particulars. The mental presentations, which are the ostensible material of experience, are in themselves ever-changing and perishing phenomena. If, nevertheless, they are found in some way preserved and united, so as to be capable of reappearing as connected experience, this must certainly be accomplished by a power not themselves.

What kind of agency can it then be, that combines into actual mental presence and methodical order the irregularly appearing and successively lapsing particulars of consciousness; that revivably stores up the memory of departed phenomena, recognising thereafter casual occurrences as fitting into the system of experience, which it has thus put together for itself, and of which it is the enduring and experiencing subject?

Surely, it must be a miraculously active principle, that can snatch up from transitoriness and oblivion the variegated play of fleeting and fading appearances, and construct therefrom the world of steady experience, of which we have knowledge. Whatever this preserving and combining principle may be, it is certain that, as soon as anything is recognised in consciousness, it has already exerted its power

on it, has already combined the phenomenal elements—themselves from moment to moment perishing, and has more or less accurately placed the whole vacillating appearance in the unitary and enduring system of experience.

In thus contemplating the full range of power which the combining principle must necessarily possess in order to constitute experience, it seems evident that nothing passively received can at all become definitely conscious. And this brings on the one fundamental assumption in Kant's theory of knowledge to which his transcendental followers cannot possibly assent. Kant believed most firmly that empirical sense-material is given to us from some source outside our own being. Indeed, the main achievement of the *Critick* consists in the presumed assimilation into the conceptual order of such extrinsically "given" material of experience.

Now the truth is, there is no material of cognition given to us from outside. Even physiology teaches unmistakably that everything found in consciousness must be all-through the exclusive property—it might be said the exclusive creation—of the feeling and thinking subject. Nothing whatever can penetrate into consciousness from without, not even through the senses.

It must, therefore, be admitted that Transcendentalists have justly corrected Kant, when they deny that the material of experience flows from an extraneous source into our receptive sensibility. But they are living under a strange delusion if they continue, nevertheless, to look upon themselves as Neo-Kantians. To them the *Critick of Pure Reason* ought to represent hardly anything but a pathetic failure, a vast amount of strenuous exertion bestowed on the elucidation of an erroneous philosophical conception. The methodical aspect of the *Critick* and its serious and scrupulous scientific tenor are certainly very imposing; but what assistance can it render to Transcendentalism?

Allured by Kant's rationalistic, though anthropocentric view, that it is our human *understanding*, i.e., a spiritual principle, that makes nature, idealistic Neo-Kantians fail to see that the entire scheme of the *Critick* falls to pieces if material is not "given" to sense, from which nature can be made. The *Critick* is essentially an account of the means through which the raw-material of sense is received, and transformed into universally valid knowledge.

In his 66th year Kant himself thus summed up the result of his researches: "Only after a laborious examination of all requisite conditions, rendering synthetical propositions *a priori* possible, the *Critick* arrives at the decisive final con-

clusion—that objective validity cannot be otherwise secured to any concept (or proposition) than through reference to corresponding sensible presentation (*Anschauung*). Consequently, beyond the boundaries of sensible manifestation, and therewith of all possible experience, there can be absolutely no cognition.”¹

Just realise what a concession for one who, during a life of research, had—in opposition to his own steadfast faith—become reluctantly conscious of the utter futility of all previous metaphysical methods; and, at last, after the supposed discovery of synthetical propositions *a priori*, had set out with the fond hope of having found a way to penetrate by dint of this new, veritably constructive agency to his cherished realm of transcendent metaphysics. But alas! in whatever manner he tried, metaphysics refused to let itself be constructed after the mode of pure mathematics. An exhaustive investigation of the efficiency of synthetical propositions *a priori* forced the inflexible truth upon him: that the synthetical forms remain empty, that the synthesising power has nothing to exert itself upon,—*if sensible presentations are not given to them*. No experience, no knowledge without sense-material. Objects conceptually originated have no validity. There is no science of *transcendent* metaphysics; only a science of the *a priori* principles of natural knowledge or *immanent* metaphysics.

Now, is there anything in this final outcome and verdict of the *Critick* that Transcendentalists can accept? Surely, no philosophical school can allow itself to push lightly aside as irrelevant and obstructive the principal conclusion, the very core of the system which, on the whole, it professes to adopt.

It is evidently the compulsory contents of percepts that Kant so emphatically opposes to conceptual understanding, declaring the latter to be void of objective validity, unless it is elaborating such compulsory material. In this sense, in the sense, namely, that concepts, or propositions of whatever kind, have no objective validity unless they have reference to compulsory perception—that is, to perception, which through powers not our own, may be forcibly and normally aroused in us,—we Naturalists fully concur in the result of Kant's Critical investigation. And we feel bound to assert, that an unbridgeable chasm severs us from such thinking as strives to reverse the direction of the objective field upon which we have to exert our understanding, wilfully seeking

¹ Vol. i., p. 403, Rosenkr. Ed.

for it in the dim and distant recesses of the intellectual sphere, instead of humbly accepting it at the sensible surface, where it is so ostensibly placed in nature.

Transcendentalists, who understand both their own system and that of the *Critick*, have—for the reasons just given—to repudiate any affiliation with a persuasion so explicitly denying any knowledge save that of sensible manifestations. Nevertheless, with Kant's own wings, or rather by force of his transcendental magic, they may find a ready and telling way of exultingly soaring over the vexatious encumbrances and realistic scruples of the *Critick*.

Kant, with all his caution, took one fatal flight, which, in spite of his many remonstrances, inevitably involves the complete surrender of his Critical system to unmitigated Transcendentalism, the very Idealism he felt so indignant at being accused of. If, namely,—as taught by Kant under influence of his rationalistic training—all synthesis of mental elements is performed by an action of the *understanding*, then it clearly follows that there can be found nothing whatever in consciousness that is not already put together by this sole agent of synthetical action. If it is indeed the intelligible Ego that through the synthetical categories accomplishes all combinations, then appearances or percepts are just as well formed by it as any other kind of mental manifestation. All mental phenomena, sensorial appearances included, are in time, and therefore with time evanescent in each lapsing instant. If, notwithstanding, they are perceived or conceived as durable, it must necessarily be the synthetising principle that unites into simultaneous apprehension the transitory instants of presentation.

Kant, who believed that appearances are given in passive space, imagined that, in the duration of such appearances, he had discovered a positive proof of the existence of foreign things, as furnishing the material of sense. And—pushing this presumed discovery to the utmost—he further concluded that only through such duration of extended appearances is the experience of our inner self in time rendered possible. In his scientific abhorrence of *Schwärmerei* he, for once, allowed himself to chuckle audibly at having thus turned the tables on the Idealists, who pretend to infer foreign existences, only indirectly, by means of inner experience. He reasoned as follows: The consciousness of our own selves is given to us in empirical experiences, but only through the inner sense in time. Now, in time, there is nothing lasting to stay and to consolidate the fleeting moments of this inner experience. Something perceptually

enduring is requisite to this purpose ; for our sense of identical subjectiveness, which accompanies all experience, does not itself bring experience with it. Therefore, the consciousness of our own selves, as experiencing, presupposes something enduringly given in perception.

The above proof rests, as Kant himself was well aware, on the assumption that appearances in space are really received, and not originated by us ; that they are, in fact, forcibly imprinted on the passive receptivity of the outer sense. And it is this compulsory character of percepts that supplies Kant with a distinction between real experience and the spontaneous creations of fancy.

We have, however, to play into the hands of Transcendentalism by conceding that this ingenious thrust at Idealism does not prove very efficacious on close examination. Not thus easily can we ever hope to glide out of the magic bonds of individual consciousness. It may be simply asked : If something enduringly given in space is needed to consolidate and to verify inner experience, how then is, for instance, the experience of a piece of music effected ? Nothing at all enduring is given in perception of this kind. Everything is occurring exclusively in time. Nevertheless we are conscious of a consolidated experience, which we believe to be as real as any experience that comes to us through the agency of space. This very plain consideration renders it altogether evident that the principle, force, or subject, which consolidates into experience the momentarily lapsing elements of feeling is, in every instance of inner or outer apperception, the one synthetising power that constitutes our own unitary consciousness ; a power placed by Kant and the Transcendentalists in the intelligible Ego, manifest in the synthetical unity of apperception, and functioning through the categories. The persistency of space-manifestations has thus likewise to be attributed to the combining and consolidating power of our own being.

We can now very well see, how, by force of the assumption of a synthetising principle of the intelligible order, Transcendentalism has thus far gained the day over all realistic suppositions on the sensorial side. It may confidently proceed to further conquests.

If it is really the intelligible Ego that combines the manifold of sense in a unitary consciousness, then—as previously stated—nothing ever so elementary can be detected uncombined in consciousness, nothing that is not already forming part of the unitary system of mental recognition. Anything like a passive appearance, in Kant's

sense, is a bare impossibility. Not only are such appearances already in themselves through-and-through the work of combination, but they occupy moreover a distinct place in the whole system of experience, and are therefore, in the very moment of realisation, inserted by the active principle into their proper position, and recognised as definitely related to other parts of the totality of experience.

All this collecting and recollecting, cognising and recognising, being performed by the assumed synthetical power, it is clear that very little can be discovered in consciousness that is not its workmanship. Before we have done, we shall see how all-efficient the synthetical principle proves to be. No wonder, for it is nothing less than our whole feeling, thinking, and willing subject; in fact, our very being mentally occupied.

We have, however, not yet explicitly accounted for the distinction between fancy and reality as established by Transcendentalism; and we are not yet quite clear about the manner in which the qualitative contents of consciousness arise.

The qualitative or sensorial element has always been to Transcendentalists the most awkward ingredient of consciousness. Yet they have various ways of plausibly disposing of it. For instance, they may say: a sensation is felt more or less as a special or qualitative element of experience in proportion as its proper place in the whole system of experience is not yet given to it. As soon as it comes to stand in its real position and proper relation to all other elements of experience it loses its sensorial character, and goes to constitute with other ingredients of consciousness an intelligible fact. Sensations, from this point of view, are, therefore, unrecognised fragments of experience, and contain least reality of all that enters consciousness.

It has always been a chief endeavour of conceptual realism to cancel the reality of sensation, making it appear, as much as possible, a mere unassimilated residuum of indistinct conception. Leibniz had so completely succeeded in this, that it happened to Kant to have to rediscover in the oddest way—by means of logic—the lost domain of sensible presentation in time and space. But to him also conceptual processes seemed pre-eminently, nay, exclusively active. And it was principally due to this strangely unnatural philosophical prepossession, that he committed the ominous mistake of looking upon percepts as passively received, intrinsically inert contents of consciousness.

The truth is: conceptual apperception actually appears,

in a certain sense, more active than perceptual apperception, because the so-called voluntary activity which constitutes attention and recognition, leads in conceptual apperception to the articulate framing of motor signs of recognition and predication, which definite muscular functions are particularly felt as an active process; whilst similar, but less definite, activities in perceptual attention and recognition are not so distinctly felt as "an action of the subject". However, at present, we are concerned not with the explanation of natural phenomena, but with their spiriting away.

Such Transcendentalists as desire to constitute objective knowledge, not by a more profound and thorough insight into the natural connexions of the perceptual order, or by mysticism within the boundaries of the world of sensorial compulsion, but rather by a complete absorption of the apparent manifold of sense into the realising and objectifying unity of apperception,—such so-called Neo-Kantian Transcendentalists have still another way out of the difficulty of sensible presentation. They may simply point to the probability that our "productive imagination," which without help from outside, quite by means of its own, is capable of constructing a more or less consistent agglomeration of all kinds of conscious phenomena, may well be competent to produce the entire contents of objectively valid experience, when working—not in its own fanciful manner—but under the strict regulations of the categories. This may with more likelihood be considered to be actually the case, as—according to Transcendental Idealism—it is this same "productive imagination" which, in fact, constructs the *a priori* figurations of pure mathematics, and discovers the synthetical truths connected with them, to which all experience has to conform.

When we reflect how much we can accomplish within ourselves, by means of intrinsic spontaneity, without the aid of sensorial compulsion, we may rightly pronounce the source of such spontaneity to be well-nigh all-efficient. The spontaneously acting subject in us is obviously the real power creating our phenomenal world. And thus, under the supposition of such a creating subject or personality of the intelligible order, one finds naturally no difficulty in legitimately reaching the conclusion, that the entire contents of consciousness are throughout, in form and material, its product; for they are certainly the product of the power, which in verity constitutes the feeling and thinking subject.

There remains now nothing essential unexplained, except

the difference between fancy and reality, which is not quite effaced by calling fancy that which "productive imagination" builds up without restraint; reality being its product, when the synthesis is performed in conformity with the categories. Experience and knowledge have to be experience and knowledge of something definitely subsisting, in order to be worthy of the claim of being objective, real, necessary, universally valid. Truth cannot consist of subjectively acquired thought merely, but has to be the agreement of such thought with some enduring standard.

This enduring standard can, evidently, not be found in anything given through the senses. We do not experience a world of steadfast things and relations lying outside consciousness. We have to admit that the principle or subject which is the bearer of the permanently and universally valid standard whose recognition constitutes knowledge for us, must be analogous in nature to the principle or subject which in ourselves is labouring to realise the standard truth. How otherwise could we at all possess universally valid experience, recognising such permanent relations as are truth for our thinking? Our individual subject, and that which it recognises, must be of essentially the same nature. As surely, then, as our own thinking subject proves—in conformity with transcendental assumption—to be a spiritual power, just as surely must its knowledge, in order to be true, consist in the recognition of the contents of a universal consciousness, borne by a spiritual subject; a consciousness not incident to time and its changes, but belonging to an all-comprising being, whose thought must be the world of everlasting reality.

This is an inevitable inference from the admission of an intelligible or spiritual principle of synthesis. According to it, the object and aim of our knowledge can consist in nothing but a growing conformity with universal consciousness, individual thought becoming more and more identical with All-Being, the more closely it is reproducing universal thought. The goal of all striving is the entire identification of our being with universal consciousness by the recognition of truth, which consists in the thinking of eternal thoughts.

This is all very clear thus far. But how strange of our present Transcendentalists to wish to graft this ancient and simple doctrine on the elaborate investigation of immanent metaphysics, *i.e.*, of the *a priori* principles of the natural knowledge of the world of sensible presentation, which most certainly and avowedly makes up the Critical system, as taught with so much German thoroughness and Scotch penetration by the philosopher of Königsberg!

However, this discussion shall not any further be embarrassed by drawing in recusant Kant, who can by no means be tortured into a representative of genuine Transcendentalism and its methods, or of the view which shall be here contrasted with it.

A theory of knowledge from the transcendental standpoint remains as yet a desideratum—shall we say of science?—a desideratum, unless, indeed, it be contained in the oracular enunciation that the thinking subject is all-efficient. But, notwithstanding the utter darkness regarding ways and means, our imagination can reach much more readily the final outcome of our transcendental than of our experiential attitude. What ardent student of thought has not shared the divine frenzy of Plato and the poets; has not with Plotinus and the mystics of all ages offered his mind to the heavenly visions of intellectual intuition?¹ Yet, shall we make it the serious concern and duty of our lives to be striving for re-identification or Nirvāna within the ecstatic seclusion of our individual souls,—and not rather with united zeal to maintain and widen the precious and precarious distance placed by the toil of our forefathers between our nobler social emulation and the ferine prowling of savagery?

¹ The following passage may bear witness that the transcendental mode of thinking is not quite foreign to the present writer. It was penned by him, when still very young, before a close study of the inexorable workings of nature had checked his flights of fancy, and reduced his thoughts to sober dependence. "Ihr bethörten Menschenkinder, verharret nicht länger in lethargischer Besinnungslosigkeit. Raffet euch endlich auf zu vollgültigem Bewusstsein. Mit einem willenskräftigen Erkenntnissact verseuchet den finstern, unheilvollen Wahn, der jenes ungefüge Hemmniss, die inerte Masse eines materiellen Universums, zwischen die rege Gemeinschaft der Geister gelagert. Es gilt nummehr der heiligen Wahrheit ins unverhüllte Antlitz zu blicken. Sehnsuchtsmuthig ergreift denn den starren Schleier todter, abstracter Dinge, der euch die segensreiche Gegenwart der lebendigen Wirklichkeit verdeckt, und reisst ihn hinweg. Als bald wird die unmittelbare Berührung mit der schöpferischen Macht euch fühlbar werden. Ihr werdet es wissen dann dass es der ewige Geist selbst ist der in den Bildern der Natur nicht müde wird eurer Seele die rechte Weisung einzuprägen. Land und Meer und Sternenhimmel, Berg und Thal, Wald und Feld werden aufhören wie fremdartige Gebilde einer abgesonderten Aussenwelt euch anzustarren. Ueberall hin wo euer Auge schweift, werden sich die Dinge in feierlich erhabene Symbole wandeln; werden sich zusammenfügen zu einer Gott-beredten Sprache, die in erschöpfendem Gleichniss die ewigen Rathschlüsse des allmächtigen Willens unaufhörlich eurem Schauen offenbart."

Begging pardon for this long German quotation in an English periodical, I wish to convey with it the impression that the present inquiry is undertaken in no unsympathetic spirit, but only because of the more profound truth which I believe to be contained in Naturalism.

II.

We have found, in agreement with Transcendentalism, that the experiencing subject must be the sentient agent, the thinker, and therewith itself the veritable forger of the momentarily lapsing particulars of thought. There is nothing wholly unexperienced and, consequently, wholly unsynthesised and unrecognised in consciousness. To be humanly conscious is to perceive and to conceive, and the things and relations we thus perceive and conceive are through-and-through our own percepts and concepts. Moreover, the transitory conscious phenomena are somehow, in spite of their successive evanescence, retained by the experiencing subject, and go to form our consolidated memory, our logical totality of knowledge, or whatever name we may give to that systematised accumulation of previous experience into which are taken up all casual conscious occurrences.

This grand sweep of power on the part of the experiencing subject means really that it is all-efficient, so far as the creation and disposition of its own conscious phenomena are concerned. But—and here we have again to corroborate the teaching of Transcendentalism—the real significance of all experience, that, namely, which constitutes its truth, must be dependent on its correspondence with a reality not originated by itself.

From this fundamental accord of Transcendentalism and Naturalism, as regards the all-efficiency of the subject in the creation of its world of consciousness, and the dependence for truth of its experience on something not itself,—from this substantial accord all less thoroughgoing philosophies find themselves excluded.

Our conflict—the most momentous of all human conflicts—turns altogether on the *veritable nature* of the experiencing subject, and on the *kind* of reality which experience signifies.

The most striking contrast between the nature of the subject of our mental phenomena as conceived by Transcendentalism, and of its nature as conceived by Naturalism, is to be found in the fact that to Transcendentalists nothing of their subject of mental phenomena can ever appear in this experienced world of ours; whilst to the Naturalistic thinker his bearer of mental phenomena, the living organism, is constantly making its appearance among the other configurations of nature. Everything hypostatized by Transcendentalism—and this amounts to all the powers of our being—remains for ever hidden from our view, never becomes manifest in phenomenal existence as an abiding appearance

or perceptual presence ; whilst, on the contrary, Naturalistic thinkers have not to postulate anything that is not capable of appearing with utmost distinctness in phenomenal existence. To the Transcendentalist, there emerges into manifest existence nothing but the conscious phenomena which he believes to be all-through the work or thought of a spiritual principle. To him there can be no other being than this intelligible Ego and its thoughts ; for there can be nothing intermediate between the spiritual subject and its own creations.

Consequently, we are at once confronted with the question : What then, in a universe where thought and being are identical, can that persistent system of mental phenomena signify, which, all through life, so faithfully accompanies us as our own body ?

It is incumbent on thinkers who have the truth at heart and are not merely advocating foregone conclusions, not to allow themselves self-delusively to glide over this paramount contrast demonstrated by nature itself as actually obtaining between the Transcendental and the Natural mode of accounting for the subject of conscious occurrences.

Both views presuppose a bearer or subject of the phenomena of consciousness, which alone are immediately given. We all naturally and practically take our sensible individuality to be this subject. The theoretically desiderated entity manifests itself to us as a bodily organisation with all the compulsory vividness and particularity of perception. Transcendentalists, nevertheless, reject this actually appearing individuality, and invent, in its stead, a subject of their own, whose existence is proved by nothing but specious words ; whose powers, all assumed without evidence, and incapable of being put to the test of experience, can be multiplied, exalted and directed as fancy or any other consideration may dictate. Who can prescribe limits to a thinking principle whose thoughts are reality itself—reality wholly constituted by thought ?

And, as thoughts in their most developed form are humanly established vehicles for the representation of extensive and frequently experienced complexes of feelings, the true signification of these consolidated complexes of feelings is, by the Identity-philosophy, with strange natural perversity and human superciliousness, believed to be of the nature of the vehicle or sign, and not of the phenomena signified. Likewise the experiencing subject is considered to be kindred to the sign-making department in us, and not to the sphere of signified phenomenal revelations. The sign-making activity,

and not the all-including, organically concentrating and epitomising subject, is thought to be the actual power gathering up, preserving, binding together and, therefore, giving meaning and reality to the phenomenal conglomerates.

Fully to realise the visionary airiness and helpless inanity of this volatilising procedure, we must firmly bear in mind that the mental phenomena themselves are considered by Transcendentalists to be in their consistency and arrangement wholly the product of the thinking Ego; that, therefore, there can be nothing binding in their sensorial presentation, by which the work of gradual conceptual transformation and assimilation performed by the spiritual agent may in any way be experientially gauged, and from which some clue to the exact nature and to the limits of its powers can be derived. Indeed, under Transcendental assumptions, nothing foreign, no resistance or compulsion of any kind, and, consequently, no limitation on the sensorial side is at all permitted to hamper the creative activity of the spiritual subject. If there is restraint anywhere, it must necessarily be in its own utterly inaccessible disposition; for, on the conceptual side, the limit of possible objective productiveness is reached only when individual consciousness has become identical with universal consciousness.

What boundless range for fanciful conjecture! What hopeless prospect for scientific progress! Shall we have a revival of the reign of logical emanation—self-evolving concepts creating our world of realities? Or will our present Transcendentalists, as they promise, seriously attempt to harmonise the unencumbered performances of their productive Ego with the stringently binding disclosures of natural science? It will be curious, indeed, to watch how they will set about projecting into actuality the conceptual obstructions between individual and universal consciousness, so that these shall constitute a natural science of perceptual phenomena, such quasi-science being to them necessarily merely the record of inadequately conceived relations—relations that are real only in eternal consciousness.

Meanwhile, we may be allowed to declare our bodily organisation veritably given in existence, as a fact of some sort, not to be argued away. To Transcendentalists our body represents a wholly incongruous superfluity, much less assimilable even than conscious states have proved to Biological Automatism.

Formerly, the sensorial affections at least, and especially the so-called sensualities were held to be of bodily origin. And this gave rise to a lively warfare, carried on through

many a century, between spiritual and corporeal strivings,—though with sufficient practical compromise even in such as Simeon Stylites. Now-a-days, we all know with perfect certainty that sensations or appetites, be they ever so sensual, nevertheless form integrant parts of our unitary consciousness, and therefore belong to the ideal and not to the bodily sphere. If any of the contents of consciousness are allowed to originate in the body, it is clear that no legitimate reason can be found why all the rest should not originate in exactly the same manner. Accordingly, it is not our sensuality, but the insensible, impercipient body itself, which after all cabalistic transmutations of phenomenal occurrences into spiritual facts, is still intractably left as a *caput mortuum* in the hands of Transcendentalists.

How, in seriousness, are we transcendently to dispose of this residuary appendix of our otherwise so ideally consistent being? Of what import to knowledge is this natural shadow of ours, so steadily abiding with us in light and darkness to the end of our days, an unwavering appearance, marvellously organised beyond the limits of all visibility, intensely astrir with living commotion, and eloquently expressive of what thoughts we have?

We are sure that it cannot be an appearance of our spiritual organisation: for, first of all, the spiritual subject can never appear; and, moreover, how could bone, flesh and brain in any way symbolically represent such a spiritual organisation in the phenomenal world? Yet something this inalienable bulk, at all times so obstructively darkening the luminous conception of spiritual being, must undoubtedly signify to us individually, as well as to experience in general. We have a right to expect from Transcendentalists an explanation of the relation of body to spirit in some degree equivalent to the explanation which we give of the relation of conscious phenomena to our bodily organisation.

In their perplexity at the irreducible presence of the *corpus delicti* of our earthly being, Transcendentalists sometimes suggest that in our present existence the body is organic to the spiritual subject,—which, if it means anything, must be intended as a hint that somehow our body constitutes an instrument of inter-communication between our own and other spirits; or, more consistently, a place or station of transition between the indistinct and confused apprehension of a certain manifold of sense and its objective recognition as universally valid truth.

But, as we have already seen, a Transcendentalist cannot consistently admit anything intermediate between thinking

and being. For him there is only a more or less adequate recognition of the eternal facts of universal consciousness. Even our voluntary activity he can regard only as a spiritual action, which, without the aid of intervening instrumentalities, immediately influences our knowledge. Any kind of effective exertion on our part can result only in a truer recognition of that which eternally abides in universal consciousness. Not by any means can we effect an actual modification of the immutable facts which are held to constitute the only standard of our knowledge.

From the Transcendental standpoint our body can be, therefore, neither an instrument of intercommunication nor a place of transition between sensible apprehension and conceptual recognition. Indeed, our body, together with all other sensible phenomena, can signify to genuine Transcendentalism nothing but the inadequate conception of eternal and unalterable facts within universal consciousness.

Now, can there be found a scientific Transcendentalist bold enough actually to maintain that our growing, ever-changing, and at last utterly perishing body is, nevertheless, when truthfully conceived, nothing but an eternal and immutable fact in universal consciousness? And, if such an indomitable thinker can really be found, it will then be still incumbent on him to show how our spiritual subject can at all be related to the eternal fact in universal consciousness which constitutes our body—our body now strangely elevated to the rank of an eternal thought of the all-comprising consciousness; whilst our own thought, which but even now was confidently settled upon as the one stable element of our personality, turns out to be a power only vicariously, changeably and confusedly conceiving the much more steadfast reality actually represented by our bodily appearance.

Thus hopelessly contradictory is the endeavour to establish objective reality by means of the conceptual recognition of eternal thought.

Reasoning from transcendental premisses, the obvious truth is, that our body must ever remain an utterly refractory group of perceptual phenomena; not only perfectly useless, but thoroughly obstructive; indeed, a constantly obtruding nuisance, wantonly and bewilderingly interpolated between thinking and being.

This monstrous negation, implied in the conceptual origination of reality, must, in all verity, form the final verdict of Transcendentalism as regards the import of that intimately familiar, pre-eminently efficient and marvellously endowed vehicle of life, which ushers our embryonic mind into being,

and with which all our developing faculties keep equal pace from the beginning to the end of our planetary existence.

Transcendentalists themselves instinctively shrink from these necessary consequences of their position. They are anxious to compromise in some way with natural science. But this is a matter of most momentous import ; a matter in which the highest interests of humanity are immediately concerned. Spiritual Recognition—or Natural Development? Either the human body in its progressive organisation has to be cherished as the only true temple and revealing oracle in the universe ; or complete extrication from every bodily impediment, through adequate recognition, must become the chief aim of human exertion. Where can there be found in human history a conflict that does not dwindle into insignificance in comparison with this one now pending? In such a vital cause, conscious or unconscious prevarication must prove intensely prejudicial to all concerned. Thorough candour is most desirable ; for we all wish unambiguously to learn what our existence really implies. Let Transcendentalists then fearlessly think out their own system, and not believe themselves rooted in real knowledge, because some glimpses of truth have enabled them to carry on an effective warfare against other prevalent interpretations of nature.

The late Professor Green, by his valiant fight against Nominalistic Idealism, has gained knightly honours among philosophers. He has clearly shown that no feeling and thinking subject can possibly originate from the coalescence of mental phenomena ; that the power which combines such phenomena must pre-exist in every phenomenal experience ; that, in fact, the mental states are not themselves our veritable being. But, as regards the necessary conclusions of his own system, this resolute assailant betrays a strangely unsteady grasp. He, like other Transcendentalists, labours to prove that the thinking principle in us originates objective reality, by the recognition of facts eternally abiding in a universal consciousness. He does not admit sensorial compulsion, or the Kantian distinction between "form" and "matter" of thought. To him our consciousness is a syncretised product, entirely the work of the thinking entity. Thus bravely does he follow the lead of his first principles, whilst considering the composition of consciousness in general. But, when he attempts to account for our gradually becoming what we are, his transcendental courage fails him. He evidently does not see his way—as he ought in conformity with his general view—to maintain that

cumulative processes in nature, and especially the growth in time of the faculties of our race, represent merely a progressive recognition on our side of facts unalterably abiding in universal consciousness. Instead of this, he declares with amazing scientific *naïveté* that "our consciousness may mean either of two things; either a function of the animal organism, which is being made, gradually and with interruptions, a vehicle of the eternal consciousness; or that eternal consciousness itself, as making the animal organism its vehicle." "The consciousness which varies from moment to moment, which is in succession, and of which each successive state depends on a series of 'external and internal' events, is consciousness in the former sense. It consists in what may properly be called phenomena in successive modifications of the animal organism." (MIND XXVII., p. 323.) It is Professor Green who tells us, that our phenomenal consciousness "consists in successive modifications of the animal organism"! Who is willing to go this length with him?

If it were once decisively understood, or only generally accepted and firmly believed, that "in the process of our learning to know the world, effects of sentient experience are accumulated in the organism, yielding new modes of reaction upon stimulus, and fresh associations of feeling with feeling" (p. 324); if that much had become quite certain to knowledge, it would not puzzle us long to determine the true meaning of such organically accumulated experience.

Of course, Transcendentalists in general cannot be held responsible for such self-immolating concessions. But these reveal the excessive scientific weakness of the scheme, and they also disclose the very quintessence of the supernatural postulation it involves; namely, the neutralisation of time and its changing consequences through spiritual agency. The last thing we should have expected to find conceded by a Transcendentalist is, that feelings of any kind can be functions of the organism, whatever that organism in itself may be taken to be. If this is so readily granted and comprehended by supernaturalists, there remains indeed no valid reason why naturalistic thinkers should any further exert themselves. The understanding of mental phenomena as functions of the organism has been their chief aim, ever since the nervous system was found to be the seat or instrument of consciousness. But with what scientific result hitherto? It has been confessed by one after another of those who have most earnestly devoted themselves to the solution of this central problem, that our understanding

is unable to conceive in the remotest degree how any function of the organism can be capable of originating conscious states.

The solution offered by Psychophysical Monism, that functional brain-motion and feeling are two aspects of one and the same fact in nature, this solution, when closely examined, turns out to be an altogether dualistic and unthinkable assertion. The activity of the subject's brain, and an observer's perception of it, must necessarily be two totally different facts of nature.

It has been shown at length in MIND XXVI.-VIII., that the organism as we know it, together with all its functions, are only percepts of an observer; and that, therefore, the conscious states in the observed subject cannot possibly be functions of this organism, *i.e.*, the observer's percept; but that the activity which in the observed subject gives rise to conscious states, has also power to compel in an observer, by means of specific stimulation, the percept of the subject's brain definitely functioning. Moreover, the foreign power, which compels in an observer the perception of a brain, may be functionally at rest. We can perceive a living brain not now in functional commotion, and are justified in concluding therefrom that the unknown power which compels our perception of a brain, is the entity which at times displays functions—functions that to itself are conscious states, but to us observers only specific stimuli, arousing perceptions of our own, that consist in certain molecular motions.

In the subject, that which feels is really never at rest. Its mere vitality involves a never-flagging activity; an activity below the level of special feeling, but accompanied—principally in the waking-state—by a more or less intensive sense of being. The definite determination or heightening of this general sense of being by specific inward or outward stimulation constitutes function or special feeling. It is, however, always the unitary subject which experiences the special feeling.

Why then should not the functional stir of the organised vehicle of naturally accumulated experience suffice to furnish our consciousness with all its contents? Here we arrive at the one great fact from which Transcendentalism really originates, and which gives it its polemical efficiency over Mental or Material Atomism. All our conscious states—which means all phenomena whatever—are in time, and with time evanescent. Consequently, the principle or power that unites into simultaneous mental presence the perishing elements, recognising them as integrant parts of an abiding

system of knowledge, cannot itself be subject to time, cannot be phenomenally evanescent, but must constitute an identically enduring and self-consistent entity.

Readers of *MIND*, who may perhaps have given some attention to the Philosophy of Organisation as partly propounded in former articles, will not feel surprised to learn that the present writer fully concurs in this cardinal conclusion of Transcendentalism. He also, taught by biological research, is quite convinced that the feeling and thinking subject is an identically enduring, indiscerptible unity.

But what does Transcendentalism actually teach us concerning the true nature of such an experiencing subject, that is not itself in time? Like us, it concludes from the contrast between our persistent system of knowledge and the evident evanescence of all conscious phenomena, that there must be an identically enduring, self-consistent subject, which thinks and feels. But where does it demonstrate to us the existence of such a subject? In what regions, accessible to human consciousness, does it endeavour to point out the real subsistence of such an entity? It merely declares that, according to its reasoning, our veritable being must have somehow a timeless existence, and that, therefore, it must subsist somewhere beyond the reach of all natural experience as a something of which we may confidently say that it is—subjectively speaking—an all-efficient power, neutralising through simultaneous and unitary realisation the lapsing instants of time and the fragmentary nature of their contents.

Now we candidly ask: Is there anything gained—are there any bearings found for the guidance of our striving by calling the persistent and unitary power, utterly unknown to Transcendentalism, spiritual or anything else? by projecting a bare mystery, by dint of mere words, into the blank nothingness of unfelt existence, where no human thought can pierce?

It would seem that, if the best part of us were really imperishably subsistent in a supernatural state, exerting therefrom all the power we may actually possess, then the sooner the remaining portion of us all could manage to get withdrawn into that superior existence, the better for every one of us. I will, however, refrain from discussing the pernicious consequences of such a doctrine. Appealing to the impartial judgment of open-minded thinkers, I will rely on purely scientific arguments.

The task is to comprehend the true nature of that identically abiding subject which experiences the phenomenal changes. Now can a Transcendentalist, or any one else, con-

ceive a being or subject constantly experiencing changes without ever changing itself? Can the most inspired intellectual intuition represent to itself an entity whose life consists in experiencing changes, and which nevertheless remains itself unalterably the same? Yet, this is exactly what Transcendentalism asserts of its experiencing subject. True it is, that the conscious phenomena can be experienced only by an identically enduring subject. This is the mystery to which the entire philosophy of knowledge naturally points. But, it is obvious that Transcendentalism possesses as little the key to it as any other speculative system.

Well, then, let us enter the laboratory of Nature and humbly give up our mind to her teachings. There one may witness with one's own senses how this psychologically incomprehensible operation of change-experiencing identity is actually accomplished. Will a candid philosopher deny, if it be clearly shown how the natural subject which experiences the conscious phenomena endures nevertheless in identical self-consistency, that then the argument on which Transcendentalism principally bases its right of existence, must be considered overcome?

Of course, Transcendentalism as the mere belief of ever so many millions of us, or as the mystic faith of many an exuberant soul, will in no wise be immediately affected by such an elucidation. The ghostly or spiritual effectuation of natural occurrences has ever been and is still the mode of interpretation most readily seized upon by primitive thinking; and the ephemeral consistency of all thought-material opens a royal road to the loftiest imaginings of idealistic mysticism. But by the actual demonstration of the identical perdurability of our natural subject and its knowledge, amidst all the phenomenal changes and experiences to which it is incident—by such a natural understanding of the indispensable postulate of every theory of knowledge, Transcendentalism would in fact find itself for ever vanquished in the sphere of scientific philosophy.

The entity which has power to arouse in us the perception of a living human organism, we recognise to be the veritable subject, having the conscious phenomena. If so, this subject, whilst experiencing its ever-varying play of conscious states, must nevertheless be capable of upholding intact its own identity. The activity which we perceive as functional changes of the nervous system of our natural subject, gives rise to its conscious states. The subject itself suffers thereby as much change as is involved in its functional activity. But now mark the truly transcendental alchemy

of Nature. Immediately upon such functional change, by dint of its own indwelling and scientifically intelligible powers, the experiencing subject restores itself to full integrity. Promptly it is ready again as an identical being—replenished in its all-endowed wholeness—to re-encounter any fresh experiential incident that may accrue to it. And, at last, when it comes to be worn by the irruption of more phenomenal change than it can restoratively overcome, then it relinquishes for a while functional brain-activity, reconstituting itself out-and-out by means of the prolonged process of organic renovation which we call sleep.

This, indeed, is the veritable, the naturally manifest time-conquering, change-compensating power in us ; a power kept efficient only by the incessant toil of ever identically reintegrating vitality, and not by the figment of changeless subsistence in some secure recess of spiritual transcendence.

Is, then, the free play of unverifiably inventive fancy more venerable than the plodding assiduity of trustfully labouring actuality ? When will the human mind grow so true and devotional as to feel greater awe at the actual maintenance of the substance and white-heat of fervently glowing and impetuously sparking life, than at its own dreamy thoughts and languid visions of efficient agency ? In every one of us, experience organically gathered-up since the first dawn of life is now at this moment, as a systematised and identically abiding whole, standing ready to test the inrush of casual occurrences. An endless train of beings, with endless trains of conscious phenomena, have for ever vanished ; yet the life-won results of these existences have all been preserved in actual presence, and are now offered as a totality of enduringly organised and generically recognising experience to whatever may individually happen to us. The irretrievable Past, moment for moment, sunk away into the lost waste of inexistence, is—counter to all thought-expectation—found, nevertheless, miraculously rescued through the potency of Organisation. Even now it is effectually present with us, a transindividual power, perpetuating the achievements of our race, and responsibly linking our own little being to all that has gone before and to all that will ever humanly come hereafter. The sacred presence of all-involving, hope-bearing life is, indeed, a mystery ; a deep inscrutable mystery, enfolding us wholly. But why invest with its secret bare emptiness beyond, when it is vitality itself that is so replete with transcendent meaning ?

By recognising the process through which organic identity and unity are maintained under constant and manifold

change, the ancient puzzle of the One and the Many, or of the enduring substance and its varying affections, has at last found its scientific solution. With it Experientialism has received a foundation which no speculation can henceforth subvert. The most vulnerable point of the Experience-philosophy has always been its inability to account through the manifold of sense, or through cumulative experiences or processes of any kind, for the systematised and enduring identity and unity of knowledge. Lately the transmissibility of acquired mental faculties has come to be an acknowledged fact, which practically solves the question. But it was not scientifically understood how the particular and transitory incidents of experience can become integrant parts of a unitary consciousness. This hitherto altogether unintelligible synthesis left room for a Transcendentalist triumph, by which Experientialism in the midst of its most prosperous era was suddenly and effectually checked, so far as philosophical reasoning is concerned. The insistence upon this one ultimate inexplicability left no solid basis for the natural science of mind or body. For it is absolutely impossible to explain a living or, indeed, a self-efficient totality of any kind by means of the aggregation of elementary constituents or forces. To students of nature it had, however, long ago become quite clear that only the understanding of Organisation could possibly furnish the clue to the mystery here involved. Consequently, it is reasoning grounded on organic facts, as explained in former numbers of this Journal, which is here measured against Transcendental postulation.

With the elucidation of the Identity-problem the most important part of the task is accomplished. Memory, synthesis, simultaneous presentation, and all other faculties and operations involved in experience are surely likewise more intelligibly accounted for by organic processes than merely by spiritual assumptions.

It is nothing new to look upon memory as organic and not as spiritual retention. I say *spiritual* and not *mental* retention, because mind, as such, consists avowedly altogether of transitory mental states, of a mere phenomenal play in time, and can consequently retain nothing in itself. Now try to imagine a spiritual principle gathering up from time mental phenomena, and timelessly preserving the same in unconscious spiritual latency, till again called forth—not by a spiritual operation but very obviously—by the compulsory force of their natural connexions with other mental phenomena, upon which occasion they are forthwith reconverted into perishing natural occurrences. These are the necessary

natural consequences of the assumption of spiritual memory. To escape such a concatenation of absurdities, there remains to Transcendentalism but one outlet. It has unambiguously to declare nature abolished altogether, which, indeed, it is implicitly already doing. There is thus left on the scene nothing but spirit, which in its all-embracing completeness must be the world-totality in unconscious repose. Any stir or throb in the *equipoise* of the perfect unity of the One-and-All would produce consciousness, yielding like lightning partial illuminations, which illuminations are our mental states—all the rest vapid illusion. I hardly think that we are in imminent danger of any such nihilistic interpretation of individual consciousness.

Remembered phenomena, arising at once as complete figurations in definite sequence, are evidently already duly synthetised. If, therefore, memory may be considered in any degree organic, it is clear that the synthetising power, active in the reviving process, must also be of organic consistency, and cannot possibly be a force exerted by a spiritual agent on uncombined memory-elements in the very instant of their re-emergence into consciousness.

As regards simultaneous representation, I have explained in former articles how all organic elaboration and function conspire to establish the microcosmic focus of momentary mental realisation, which I have called the "mental presence".

It needs, really, only a correct understanding of Organisation to make it impossible for any thinker to dispense with its teachings in the interpretation of the facts of consciousness. Unfortunately, our literary education renders us too apt to lean in our reasonings on words, whose meaning we only very generally and vaguely realise, and also to give ourselves up to emotions nurtured in the same artificial and pliable medium, and not in actual contact with the stern realities of life. Who of us has not at one time or another had his full swing in those boundless realms of frictionless flight? But how many a fine mind has been for ever unprofitably dissipated in the serenely rarified atmosphere of such uncontrolled thought! How many a nation has been mortally convulsed, or has utterly perished through deadly struggle of its thought-phantoms with the inexorable realities of nature! Let young thinkers of our time seek to gain—as concerning us most nearly at present—an insight into what Transcendentalism has practically done for Germany from 1815 to 1848, and may they benefit by so eloquent a lesson! When a student in Germany, a quarter of a century ago,

the present writer also had his fill of conceptual enthusiasm, kindled by lively intercourse with some of the foremost pupils of Fichte, Schelling and Hegel. It seemed all so sweepingly intelligible and piercingly clear in those young days—the universe at large and our lives therein. Not so now, those amazing realities of ours with their engendering throes. Not winged ideas, transporting the soul back to archetypal being ; or “ clouds of glory ” trailing from a pristine home : but the triumphant swell of conquering actuality, efficiently, relentlessly, uplifted from death and decay ; a sphere of rigorous and veritable fulfilment, where the right and joy of every realising thought has to be earned by submissive zeal.

III.

What then is the import of knowledge ? What fruth does it recognise and what use does it subserve ?

Understanding, intelligence, reason, in short, the recognising principle in us,—has it to seek for its object of knowledge in the direction of generalising and unifying conception, or does it find it, on the contrary, quite on the other side, in the direction of multifariously given perception ? Does it, by dint of transcendently derived powers, reconstruct in individual consciousness an eternal world of universal validity, whose recognition is truth ; or does it rather, by dint of naturally established correspondences, place our unitary being in systematised and truly valid relations with the changeful domain of external influences ? Our thinking—does it become true through its adequate realisation of an intelligible world eternally subsisting, or simply through its precise concordance with the mutable world of sensorial compulsion ? Is correct thought in itself veritable reality by force of its identity with universal thought ; or is it merely premonitory of such reality through its accurate foreshadowing of actually realisable interactions between ourselves and other things ? Is thought, in fine, identical with being ; or is it only the epitomised and unified expression of our own relations to a sphere of foreign existence, that affects our senses ?

It cannot be denied that, in thought, we seem to be steadfastly realising a unitary world of universal validity, incommensurably elevated above the transitory play of sensible occurrences. The fleeting manifold of sense appears to be recognised, or to become real to our thinking, only when it has fallen into its due place within the pre-established system of thought-relations which constitutes the abiding uni-

verse of conceptual realisation. Thus autonomous thought presents itself to our contemplation as a sphere of complete world-inclusion.

The fundamental impediment, however, to the acceptance of such conceptual comprehension as paramount reality, lies in our natural and irrepressible belief that it is through the senses and not through thought that the real world becomes present to us. We are quite certain that the transitory play of sensible occurrence means, in all earnest, our realisation of the veritable world of efficient actuality. We are unmistakably aware that our perceptions signify definite figurations of foreign influences.

But the great philosophical difficulty in the way of such a naturalistic view of reality obtrudes itself in the indisputable fact that the entire object of sense, as realised by us, is throughout the product of powers inherent in ourselves. The object, whether principally perceived or principally conceived, is altogether made up by the perceiving and conceiving faculties of our own being.

Now the real question is: Whether thought-realisation is in itself—in spite of sense-presentation—the objective world, the real object to be known, the butt and termination of our cognitive exertion; or whether it merely symbolises a system of reality or object of knowledge signalised through the senses, and constituting our veritable field of desirable activity.

If our percepts and concepts have indeed relation to a sphere of externality beyond the senses, which renders them true or objectively valid, then it is certain that this can be only accomplished by a pre-established correspondence, through which our sensorial affections, specifically aroused by those external influences, become signs of their existence and characteristics. There can be no doubt, that the thought of an individual mind, not identical with objective being, can signify existences and occurrences extraneous to its own self only by means of naturally or supernaturally pre-established concordances. The numerous philosophical efforts, aiming in some way or other to assimilate the realising mental phenomena with the nature of the foreign or objective powers thereby realised, must for ever remain futile; for mental phenomena are specific intra-organic functions only awakened by foreign influences. And it is clear that such intrinsically awakened manifestations, consisting wholly in the play of specifically organised energies, cannot possibly bear any resemblance to the awakening influences. Any kind of Realism, thinking to grasp within the sphere of mental manifestation the veritable

nature of either an intelligible, *i.e.*, super-mental, or a sensible, *i.e.*, extra-mental, object, is necessarily mistaken. The sense-compelling powers as noumena or things-in-themselves are not directly revealed in the sensorial awakenings which they stimulate. These awakenings are altogether incommensurable effects within the specific organisation of an autonomous subject. All conceptual realisations are thus likewise due to powers within the organic individual systematising and unifying the whole range of its own perceptual awakenings. They are certainly not due to recognition of conceptual types pre-existing in an intelligible world, or of generalities inherent in the particular objects perceptually symbolised.

Whatever relations between the experiencing individual and the source whence the stimulating influences emanate may be truly recognised, must evidently have already been potentially subsistent through pre-established correspondences between its own organised functional capacities and the system of powers capable of specifically stimulating the same. From this natural point of view our consciousness would consist in mental states which can be aroused in us, through the instrumentality of our organism, by a world of corresponding external powers. They would therefore signify, in reference to ourselves, the bearings of such powers on our own being; in reference to the external powers, as such, however, they would simply serve us as signs of their special nature and of their sundry mutual operations on each other. The actual correspondence would obtain between our own organisation as thing-in-itself and the other things-in-themselves, forming together an inter-dependent universe of such things-in-themselves or rather of power-complexes. Our mind would realise—primarily through specific sensory stimulation from outside and then also through intrinsic stimulation—relations pre-established between our own organism and the other things. This mental realisation would take place, because the specifically stimulated sensory functions are at the same time also the subject's sensorial affections, which, by means of organically pre-established interdependence within the nervous system, become, on spreading stimulation, significant of a more or less extensive range of relational correspondences between our own being and the world of which it forms part.

Imagine our organism to be an instrument most delicately attuned at its receiving surface to what appear to us as external vibrations. The foreign powers, more or less at random, in a more or less fragmentary manner, more or less

indirectly through adjoining media, play upon it the rhythm of their own activity. By means of the specific energies of living nerve-tissue the imparted rhythms are to the organic subject sensorial affections. Now the entire nervous system, in its present molecular composition and structural collocation, represents the result of such rhythmic attunement between the world of foreign powers and the intrinsic powers of the organism itself; a result attained by endlessly reiterated interaction between those foreign powers and the affected organism, during which process the gradually accomplished organic adjustments are cumulatively transmitted from one generation to another. In what we call the nervous system and its functions, we thus find efficiently reconstituted by organic reproduction the complete range and practical order of possible effects from sensory stimulation by foreign powers, so that anything normal or abnormal that may now strike upon it the stimulating rhythm will elicit the corresponding sensorial response. But we are not merely passive receivers of stimulating rhythms. We spontaneously set ourselves in readiness and motion to solicit or to reject contact with their source of emanation; for this contact means to us either satisfaction or danger through harmonious blending or destructive clash. That which renders contact with foreign powers salutary or deleterious to us, lies in the nature of the foreign powers as things-in-themselves in their relation to our organism as thing-in-itself; and not in the sensorial affections which they arouse in our consciousness through stimulation. It is connatural suitability or unsuitableness to what we ourselves are or, as representatives of our race, tend to become, which commands our attraction or repulsion, our sympathy or aversion.

We ask whether, as the only possible way of escape from the Identity-philosophy, or simply taken on its own merits, such a naturally pre-established correspondence between our own and other existences, sufficiently explaining the objective validity of our percepts and concepts, is really so unintelligible as Transcendentalism seems to think?—so unintelligible, for instance, as individual recognition of eternal facts in universal consciousness? Of course, those supernaturally pre-established harmonies of the rationalistic school, by which it attempted to account for the parallelism of the inner and the outer world, are altogether inconceivable and, indeed, quite useless. If thought, by means of supernatural powers of its own, is capable of originating all the contents of our consciousness, what need is there for hypostatising a nature outside consciousness to harmonise

with them—a nature of which we never can become at all aware, *i.e.*, conscious? It was the inexplicability of the intercommunication between the thinking and the extended world, between the world seemingly in consciousness and the world seemingly out of consciousness, that led to the assumption of such a supernaturally pre-established harmony. But we understand now quite well that our percepts and concepts are alike integrant parts of our own consciousness, and thus the ancient difficulty, how matter can possibly influence mind, has ceased to exist for us, if by matter be meant, as formerly implied, certain sensorially compelled affections hypostatised.

If we are in any way affected by externalities, it is certainly no material stuff of theirs that makes impressions on our mind. The entity which we perceive as our own body, is affected by other entities which we perceive as bodies external to it. Through the process, which we call stimulation, functions within our own organism, yielding sensorial affections to us, are set going. These sensorial affections serve us as signs whereby we recognise the existence and, in a certain sense, also the constitution of those other entities perceived by us, together with their bearings on our own being. This is no more than direct observation teaches. If, however, we are so speculatively or transcendently possessed as to feel daring enough to deny sensorial compulsion or sensory stimulation altogether, then we find ourselves mercilessly driven to the untenable position exposed in the last section, where we had to declare our own body an altogether useless and obstructive nuisance, and at the same time an eternal fact in universal consciousness.

That there exists between our own being and the world of externalities a wide range of connaturally established relations, is a belief and an interpretation so manifoldly corroborated that it cannot but appear evident to every unprejudiced mind. When I understand the gestures and speech of another human being, is not this sufficient proof of my standing in connaturally established relation to him? Is not blood-affinity, involving similarity of origination and organisation, the efficient agency through which his being is rendered connatural with mine? And is it not this connaturalness which enables me to understand his expressions and thoughts? Can Transcendentalism be believed when it is forced to maintain that all this objective recognition and consentaneity is accomplished by my individual understanding apperceiving in universal consciousness eternal facts, which render it true that there actually subsists in that

intelligible region another human being? And when by means of expressions perceived as emanating from such another being I realise the thoughts of this other being, which we both believe to be indicative of certain natural occurrences, can Transcendentalism persuade us that, in this case, my own thinking is also the only veritably existing reality, and that all the rest—the bodily expressions and the thoughts inferred therefrom in another being, together with the natural occurrences believed by both of us to be indicated—that all these seemingly interacting agencies are in reality non-existent, except as my own thought realising certain facts in universal consciousness?

Birth and death, consanguinity and natural development, the whole stirring scene of our natural griefs and joys have no place in a philosophy in which understanding originates nature, and in which, therefore, thought and being are identical. In such a spiritually constituted world the acorn does not in truth reproduce the oak by natural growth, nor does the supreme marvel of natural achievement in reality occur—microscopical germs do not faithfully re-evolve the bodily and mental faculties of parent-organisms. Our world is not the triumph of life over death by constant organic resuscitation; but, on the contrary, a mere confused reflex of unrecognised eternal facts, only a sombre, death-like fiction awaiting intellectual vivification.

The worst feature, perhaps, of such a belief in a hyper-organic, thought-originated world, would be its necessary injunction of intellectual quietism as final aim of all our exertion. Transcendentalism has to insist on the immutable and sempiternal permanency of the completed system of all world-relations, as constituting an eternal fact or undeviating standard of truth in universal consciousness. If our known world consists really in the intellectual synthesis found accomplished in conceptual consciousness—a synthesis whose system of relations we are endeavouring to comprehend as held together, beyond the reach of time, by a single activity of the synthetical unity of apperception; if such is the process by which our world is made, then it is clear that, in order to raise such a synthetically constituted universe from the rank of mere subjective fiction and fitful apprehension to that of steadfast, universally valid objectivity and unity, there must be hypostatized an eternal intelligence actually originating and energising through synthetical thought the complete and undeviating system of world-relations which our own wavering thought only inadequately recognises. The climax of possible existence for us would then be thorough

identification with universal consciousness by means of adequate thought. But meanwhile, in conformity with such a view, it should become our aim to realise in the sustained effort of a single synthetical act or concept as much of universal consciousness as possible; a feat actually and seriously attempted by those Hindu Transcendentalists, who passed their lives in the intellectual intuition of the single and all-containing word Om.

In comparison with such a consummation, Hegelian evolutionism would probably seem to most of us a lively occupation. But by giving prominence to the logical evolution of reality at the expense of its synthetical unification, Hegel destroyed the immutable permanence of universal consciousness and thus deprived individual thought of its transcendental standard of truth. Those who have had sufficient curiosity to make themselves acquainted with some of the conceptual world-constructions evolved by the oracular genius of sundry young Hegelians, will agree that the pattern of the "adamantine woof of concepts" is at least as variable as the figurations projected from a magic-lantern. Logical world-evolution is a very grateful exercise to adventurous novices, allowing a grandiloquent and consequential sweep to their fertile imagination. To the learned and intellectually mobile master, dialectic evolution may have offered itself as a welcome device to evade the final attitude of quietistic fixation assumed by his more consistent Hindu forerunners. For, viewed in the light of Hegel's own system, this evolutionary process means also only inadequate, discursive recognition on our part of the Absolute, in which all possible logical relations abide as a completed totality of being.

World-emanation can be philosophically conceived as coinciding with world-immanence only through the intervention of an unintelligible miracle. A perfect, all-comprising logical totality can be rightly thought of only as changeless and immutable. The influence which breaks the repose and deranges the perfection of All-Being has necessarily to be considered hostile and undesirable. There is no legitimate way of thinking by which particularisation within an Absolute can be made to appear as its own harmonious manifestation. Here determination is inevitably negation.

The alchemy of Organisation alone renders possible and efficacious the coincidence in one and the same subject of an identically preserved totality with a successive determination of manifold affections. Here we find structurally and functionally realised, through organic processes explained in former articles, the compatibility of logical steadfastness and

all-inclusion with sensible change and objective specification. The co-existence of identical duration with temporal mutations, so unintelligible to philosophical thought, is demonstrably effected through organic processes.

The chief aim of Conceptual Transcendentalism has ever been the cancelling of time and its phenomenal diffractions. It strives to comprehend in one simultaneous activity the entire contents of universal consciousness. In our own unity of apperception, in which we combine through thought into one single mental presence many transitory moments of perception, is seen the beginning of a process which, carried to the utmost, must culminate in identification with universal consciousness, through an adequate and simultaneous realisation of all eternal world-relations.

But what kind of eternity is it that Transcendentalism is thus hypostatising? Is it simply infinite duration? Or is it complete riddance of the phenomenal illusion of time? It is not difficult to see that only the former is consistently implied in Conceptual Transcendentalism. If universal consciousness is at all analogous to our own consciousness as conceived by Transcendentalism; if it consists in the synthetical activity of a supreme understanding, holding together in one simultaneous presence all world-relations; then such a synthetical activity must necessarily be continued without relaxation from moment to moment. The result of the activity may remain identical all the while, but the synthetic process has to be maintained without interruption in order to produce such an identical result. It is, therefore, a continuance of effect, an identical filling of time, but not veritable nullification of all time through timeless being, not true subsistence in eternity, that distinguishes the contents of universal consciousness from those of individual consciousness.

From this alone there might be drawn various conclusions seriously damaging the tenets of Transcendentalism. If it were true, for instance, as some eminent philosophers assert, that only change of mental states can constitute consciousness, it would follow that universal consciousness must be entirely unconscious, because it is thought of as quite changeless. However, it is not very clear why change of mental states should be indispensable to consciousness. If I look steadfastly at a tree, I remain conscious of the presence of the same tree, as long as my perceiving faculties keep unimpaired. Why should not a universal consciousness with indefatigable faculties remain for ever unchangeably conscious of the totality of all world-relations? But, in this case, if

we do not wish to pay ourselves with mere words, there arises a much more puzzling question : By what means is the synthetical activity of universal consciousness maintained in permanent efficiency ? We can organically explain by what marvellous natural operations the consciousness of a human subject is kept efficient. And, as the hypostatised universal consciousness is constituted solely from analogies to individual consciousness, we ought to be able analogically to explain the source of restorative supply of a power conceived as continually expended. Of course, we may summarily settle this whole matter by a high-flown dictum ; but we are therewith transgressing the sphere of legitimate thinking. The undiminished persistence of an unregenerated effect-producing power must ever remain to our mind an irreconcilable contradiction.

It is most obvious that only ignorance of the astonishingly interlaced conditions, actually co-operating in the production of natural manifestations, can seduce our fancy to project analogous manifestations into a region of unconditioned subsistence. Bearing this weighty truth in mind, it is interesting to trace the spiritual transmutation of other organic occurrences that have been dimly guiding the Transcendental mode of thinking.

Geometrical space-relations have, for instance, from early times to the present day afforded a welcome support for the assumption of an all-comprehensive substratum of existence. Geometrical figures, together with their properties, are in a certain sense necessarily implied in the very existence of space. It needs only a recognising or realising understanding to gather up into synthetical apperception the proper space-relations, in order to construct the geometrical figures therein implied, and to recognise the geometrical truths necessarily following from such permanent relations. In a similar manner all world-relations might be implied in the existence of the bearer of universal consciousness, and we should then through recognition become partakers of the eternal facts or truths involved in all-comprehensive being.

But, first of all, it is not clear how a universal understanding, fashioned after the model of conceptual consciousness, could by its permanent synthetical activity constitute anything at all analogous to space, which is essentially perceptual, essentially different from conceptual thought always taken to be unextended in all its phases. However, as with time, it will on close examination be found that in Transcendental conception space is not really annulled, but only its perception is brought to a focus, very much as in our own

individual conception. Indeed, representations analogous to space-relations enter into the present Transcendental world-construction almost as fully as they once entered into Spinoza's constitution of the absolute substance. But, of what is the space of our actual world made? Whoever has realised how space-relations are throughout conditioned by specific energies and structural collocations, forming part of our individual organism, can no longer deceive himself with the idea that anything equivalent or similar to space can be intellectually realised or even vaguely imagined as subsisting without the agency of individual vitality, specifically organised from periphery to centre.

It becomes transparent, and this to an almost painful degree, in the presence of so much exalted thought and conviction on the part of Transcendentalism, that it is after all nothing but our own apperceptive faculties, potentially idealised, that are made to serve for the consciousness of a universal subject. And, to complete our humiliation as pretended recognisers of the great world-scheme, the impotence of our constructive imagination, in comparison with the rich competency of nature, discloses itself overwhelmingly in the fact that, in spite of all its straining after supreme idealised perfection, Transcendentalism has taken heed only of an inferior portion of our being; omitting almost altogether, in its constitution of universal existence, the very consummation of all faculties to which intelligence is in reality merely subservient. Transcendentalism represents indeed an apotheosis of the centripetal efficiencies of our organisation of the ingoing apperceptive current. But the centrifugal activities, the outgoing exertions, that have to mould the raw material of nature in conformity with the generical unity of purpose which we intellectually realise, and which is potentially predetermined in individual life by its definite cycle of development, during which it is gradually falling into more and more complex relational fulfilments with its environment,—all these volitional operations, veritably constituting the practical and ethical import of life, find no suitable place in the Transcendental scheme, a scheme aiming only at eternal recognition, and not at moral and æsthetic world-idealisation within actual existence, through rational employment of natural means.

It is the understanding of the consistent texture of the manifoldly interdependent perceptual compulsions in their multifarious bearings on our individual and generical well-being, that makes up veritable knowledge. And the true import of all this knowledge is the power it gives us voli-

tionally to control and to modify the determining complex of foreign influences, so that it shall minister with as few disadvantages as possible to our individual and generical development and destination. The fulfilment of human destiny through progressive organic elaboration is the desirable result naturally aimed at by life itself; and the means to subserve this end are the suitable adaptation and harmonious transformation of all available resources of nature.

To become thoroughly efficient as conscious agents in human development we have, however, to guard against false mysticism on the perceptual or phenomenal side, as well as against the conceptual or intelligible mysticism which we have been here combating. Because the realm of things-in-themselves is cognisable to us only through its sensorial effects, or because only phenomena are known, it has appeared to some philosophers allowable to look upon the power affecting us, or the power behind the phenomena as the All-Being or the Absolute, or something containing infinite depths of reality. This Perceptual Transcendentalism is as demonstrably untrue as any kind of Conceptual Transcendentalism. Everything, in perception as well as in conception, depends on the realising agent, on the pre-established and sustained faculties of the perceiving and conceiving subject. Allow the human being in his actual state to degenerate in any respect, and where remains the virtue and beauty displayed in the higher manifestations of human life? It is, indeed, not the conceptual recognition of exalted existence, it is just the natural realisation of exalted life, that ought to be made the object of our striving; and it is the organically preserved and accumulated wealth of such life, inherited and bequeathed, that imparts to the transitory incidents of our individual existence their worth, their pathos and their sublimity.

The true mystery of it all lies in the realising power itself, in the efficiency and possible concurrence of conditions rendering realisation at all practicable and actual. It is an inscrutable power that appears to us as organised entity, manifesting the wondrous properties of life; but it is obviously the harmonious co-operation of surrounding conditions that sustains such organisation and that furnishes it with its object of mental realisation.

We have therefore, once more be it said, designedly and with growing insight into the means furthering human well-being, to regulate and to shape the conditions affecting us through sensory channels in order that we may maintain

life at its present height, and may continue to elevate it still more.

Conceptual understanding has no virtue in itself. It serves us merely as unifying guidance in the suitable elaboration of our multiform environment. Only results organically wrought through beneficial influences within our natural being have real value for us. And only the diligent cultivation on our part of such beneficial influences secures a lasting possession of values thus realised. Knowledge is no end in itself. Its object lies not in an intelligible sphere, but in the sphere of sensorial influences. Its practical aim is not liberation from its natural entanglements, but, on the contrary, rational elaboration of such entanglements. In fine, our being and its knowledge are wholly natural, and as mysterious or as intelligible as the rest of nature.

III.—HINTON'S LATER THOUGHT.

By H. HAVELOCK ELLIS.

JAMES HINTON has come to be thought of as an original and profound if somewhat obscure metaphysician, a sort of preacher of Nirvâna who somehow tried to bolster up Christian orthodoxy, who also at one period dealt in a very ascetic way with morals. There can be no doubt that Hinton himself is in some degree responsible for this conception; it may easily be traced to *Man and his Dwelling-place* and *The Mystery of Pain*, probably his best-known works. But these books represent early and comparatively crude stages of his development. It was only during the last five years of his life that Hinton's genius was adequately manifested. During that period his mental activity was immense; he wrote constantly, although he published scarcely anything. Such of his work as has yet appeared since his death is, for the most part, either confined to the immature periods, or misrepresents and mutilates the last period, an exception being made in favour of some portions of *The Art of Thinking*. When his later works have been fairly edited it will probably be found that his claim to remembrance (putting aside the remarkable and fascinating personality of the man himself, which can here be only alluded to) lies, not in these already published posthumous books, not in *Man and his Dwelling-place*, or *The Mystery of Pain*, but in works that at present have scarcely been named, and are not even known by most of those who have undertaken to speak about Hinton. Among these may be mentioned first (as it will be first published) "The Law-breaker". This is an attempt to set forth the nature of genius, especially in regard to the false laws among which genius finds itself, and to show that the genius-way of action, so far from being an abnormality, is the life of man in miniature, the laws of genius becoming the laws of man. In "Ethics" Hinton undertakes to prove a thesis of which "The Law-breaker" represents only one aspect; he sets forth a morality of which the law, to the exclusion of all other laws, is: "Attend to the facts; do what is wanted"; the natural guide being impulse made perfect by acceptance of the law, and free to accept all pleasure as well as pain. This conception, audacious as it must probably seem, had its origin in Hinton's singularly profound sense of the moral

disorder now existing, and of the physical and moral evil which he found bound up with the present notion of "virtue". In "Ethics," as in his other unpublished writings, there is no attempt at construction either of a literary or logical kind. It consists of passages having, as he put it, an organic rather than an anatomical order. In "Thoughts on Home" Hinton deals with what he regarded as for many reasons a crucial question, the question of marriage; he endeavours to ascertain what is, in the present condition of society, the true relation between the sexes; and he also deals with prostitution and other allied questions. Finally, he also wrote an "Autobiography"; which again is not formal in construction, though it is a record of the highest value. It might be compared to the *Confessions* of Augustine or of Rousseau, but it is unlike either. As a revelation of the soul of genius in its nakedness of absolute passion and sincerity it probably stands alone.

It will not be possible or advisable within the limits of this paper to discuss these works in detail; that must be left till they are published. All that can here be attempted is to indicate the chief lines of Hinton's activity and the general nature of the results he attained. In order to do this it will be necessary to touch, however briefly, on Hinton's metaphysics, which was the product of the earlier stages of his thought, and which is already (in *Life and Nature, The Art of Thinking, Philosophy and Religion*) as completely before the public as it is likely to be.

When he said that "Positivism bears a new Platonism in its bosom," Hinton was indicating, as clearly perhaps as can be done in one word, his own position in philosophy, a position which is perhaps not quite easy to define. For he rises into philosophy, as Mr. Shadworth Hodgson has noted, out of common sense, science and theology. He was less of a professional philosopher than even Schopenhauer. But even Schopenhauer had a distinct relation to Kant, and Hinton, notwithstanding the more or less unconscious Hegelianisms which formed part of his method, has a no less marked relation to what is vaguely called "Positivism". It is, he says somewhere, the chrysalis of his own philosophy. And if with his affluence of ideas, his unconquerable optimism, he was sometimes eagerly accepted by those who sought support for a weak faith or an escape at any intellectual price from the trammels of the actual, we may say indeed that the fault lay largely with himself, but it must not blind us to the significance of his thought in its chief lines.

And in its chief lines Hinton's philosophy was an attempt

to make a new synthesis of the discordant elements of modern thought. It was an attempt to show that, when truly seen, nature known by the intellect and nature known by the emotions—in other words, science and religion in the largest sense of each—show one and the same *action* or process. The starting-point of his first serious attempts in philosophy seems to have been a certain conception of the Absolute. Hinton, when he began philosophising, firmly believed in an absolute which might be known; not indeed known *intellectually* but *through the moral sense*. And, so known, it was not a thing but a process of which things were the phenomena, an everlasting *action*. This process he called indifferently Being, Love, God, Nature. Such was the conception with which Hinton set out, and it seems necessary to devote a few words to it, not only because it engaged so many years of his life, but also because it forms the true starting-point of much that is fruitful in his later thought, more especially his conception of nature and natural law as not merely including but surpassing man and human law, and all that follows from that conception. In later years this "Actualism," as he sometimes called it, to some extent lost its hold upon him (though he never absolutely rejected it), and in the Preface (written in 1874) to the papers which have been published under the title of *Philosophy and Religion*, he had to confess that, from being what seemed a clear perception, it had become "only a suggestion of far distant things". He wrote very little on metaphysics after 1870, and in that little there was (as is frequently found in a thinker's final stage) less of individual idiosyncrasy, more assimilation to the thought of other thinkers. But he never ceased to have a vivid sense of a *living* reality underlying phenomena. This he called sometimes Nature, sometimes God, though it had little connexion with either the scientific Nature or the theological God. This Being, or rather these Beings (for he frequently distinguished them, making Nature the nearer, God the more distant and ultimate), which his instinct for religion had thus created, became the recipients of Hinton's most intimate self-revelations. But they were not, even consciously, philosophical conceptions, and we can best study them in the "Autobiography".

It is in *Man and his Dwelling-place*, in *Life in Nature*, but chiefly in *Philosophy and Religion* (and the four volumes of printed MSS. from which that selection is made), that the early metaphysical stage of Hinton's thought may be most clearly seen. *Man and his Dwelling-place* (published in 1859) is to the reader of to-day of little interest. It represents an

immature stage of Hinton's thought, nor is it perhaps the best presentment of that stage. A remarkable book it undoubtedly is, characterised by a tone of prolonged and high-strung rhetoric, an insistent earnestness which feared to leave anything to the reader's intelligence—characters, however, which scarcely foreshadowed the qualities of flexibility, suggestiveness and delicate breadth which his later style frequently attained. The second book dealt with the spiritual life of nature. Perhaps *Life in Nature* is, as a completed result, the most satisfactory of Hinton's works; it is that in which he has most adequately thought out a single pregnant idea. He has well summed it up in the Preface to the second edition, written in the year 1875, the last of his life:—"The first part tries to resolve Life into mechanism, and the second tries to prove that mechanism is Life." And he adds:—"It must seem to many a foolish task. But all I can say is that I believe both arguments; and that to me they seem to make a consistent whole; a whole which it is joyful to think true." The present paper is not concerned with any complete or systematic exposition of Hinton's opinions; it is rather an attempt towards their elucidation and criticism by the consideration of some points in his philosophy, ethics and religion. It is not therefore necessary to analyse *Life in Nature*; it is a book to be read.

How this view of the relation of the organic to the inorganic had fascinated this remarkable thinker there is in all his earlier writings abundant evidence. Hinton, with his fine scientific instincts,—who finds fault even with Herbert Spencer for not being scientific enough by endowing his "physiological units" with an "inherent tendency"—was also a poet. Not a poet who had imported into the regions of strict thought imaginative modes of thinking acquired outside—he had none such—but a poet nevertheless who had found through science and religion a vision of Nature which was at once a perfectly adequate emotional and imaginative satisfaction, a perfectly adequate moral satisfaction. This vision of a right moral world and a right physical world, which were yet one,—and that the spiritual, the *actual*, world,—never forsook Hinton. The words of Mrs. Browning's sonnet, a favourite of his own, express with well-nigh scientific accuracy this vision of a Nature—

"With dream and thought and feeling interwound,
And inly answering all the senses round
With octaves of a mystic depth and height,
Which step out grandly to the infinite
From the dark edges of the sensual ground."

As an instance of his intensely imaginative seeing, nothing can be more characteristic than a passage that is thrown simply and incidentally into one of his letters :—" The Being I mean by ' Man ' is the being I *perceive*, and about whose mode of being you might ask me innumerable equally unanswerable and indifferent questions. I haven't reasoned him out. I perceive him, nay, I love him, that is, Her ; for she is by no means a ' colossal man,' but a little, trembling, quivering, passion-driven woman, throbbing with uncomprehended instincts, and afraid with timid regrets and sorrows for half-imaginary sins, which she repents of, but knows she will still commit, and does commit. I don't know about humanity as any ' colossal ' thing whatever ; but that little restless woman-thing I know, for she works in me, and keeps me in perpetual unrest. Would not the wave be quiet if it were not for the sea, which, when the spirit breathes on it, can let no wave be still ? "

It is necessary to recollect this aspect of Hinton's mind even when we are dealing with his attempt to lay a rational basis for the harmony of intellect and the religious sense. In a paper entitled " Professor Tyndall and the Religious Emotions," which is republished in *The Art of Thinking*, Hinton has embodied his doctrine on this point more lucidly perhaps than anywhere else. He takes as his starting-point Professor Tyndall's words :—" To find a legitimate satisfaction for the religious emotions is the problem of problems of our day ". That is, we have to seek for some thought respecting the universe that shall fulfil two conditions : (1) satisfy the religious emotions ; (2) harmonise with the results obtained by science (that is, the senses and intellect) in their working on the universe. Now, argues Hinton, the most emphatic result of science is that there is nothing arbitrary in the series of events which constitute our experience, that they may all be reduced to law. And the most emphatic demand of the religious emotions is that the object to which they look shall have nothing of mechanical necessity. To find legitimate satisfaction for the religious emotions, then, we must seek a thought of the universe which shows it as not arbitrary and as not mechanical. Now, proceeds Hinton, the real simplicity of the problem becomes manifest. For, on the one hand, the emotions demand the exclusion of the arbitrary as much as science. And, on the other hand, science as absolutely rejects the mechanical as do the religious aspirations. To prove that this is so—that science rejects the mechanical—reference need only be made to the fact, now generally recognised, that whatever we reduce

phenomena to, say to *force*, that *force* is not an absolute existence, but only a symbol, an *x*. "To science the world is no more mechanical than it is coloured or warm; as colour is an idea derived from a mode of our sensation, so also is force or mechanical necessity." Therefore both science and the religious emotions demand, in the thought of the universe that is to satisfy us, freedom and a necessity not mechanical. Now it is, says Hinton, that we perceive we have before us a problem which we need the aid of our emotions to solve. It is the "moral Emotions" only which can give us such a thought, call it *love*, or *rightness*, or what we will. It is only love, rightness, that is at once free and necessary; and it is that, therefore, which we must regard as the existence which presents to us the phenomena of Nature. In other words, and translated from terms of metaphysics into less questionable terms of psychology, we find that what we have been seeking is intellectual truth viewed emotionally, that is to say, *imaginatively*; that, precisely as the intellect satisfies itself by using the data of sense, so the emotions find their legitimate satisfaction in using the data of the intellect. He gives an example:—"Cause and effect" is an universal condition of the phenomenal. Now cause and effect is the name we give to the ceasing of one thing coincidently with the occurrence of another; it has been described sometimes, even in the language of scientific men, as 'one thing *merging itself* in another'; as if it were—even when looked at from without and in mere appearance—the visible image of the giving up of one life for another's being. Now if the order of Nature truly were mechanical this would of course be a merely inaccurate expression, as implying spontaneous action where there can be none. But if material Nature be but the appearance of an existence not mechanical, but acting in ways to be truly grasped only with the aid of the Emotions, then the expression is more than justified. So far, at least, the appearance may be rationally referred to the fact; for what appearance could more truly represent an act of everlasting 'merging self into another' than this perpetual flux of cause and effect which Science presents to us?" If, therefore, we wish to find legitimate satisfaction for the religious emotions it must be by exercising them on the truths of science. Without the aid of the emotions truth never has been seen vividly or truly at all. That seems to be the substance of Hinton's argument, and it is a fine and subtle effort towards the solution of that great "problem of problems". It is an attempt to find a stable basis for the

legitimate satisfaction of the soul's aspirations in the facts of the world, in science, in law, in place of (to use Hinton's words) the "partial and precarious satisfaction they still endeavour to find in claiming a sphere of exceptions to the law, or a *Wili beyond it*".

Hinton has frequently re-affirmed this position as to the relation of the emotions to the intellect, sometimes rather obscurely, and it has occasionally been misunderstood. It has sometimes appeared as if he held the emotions to be a source of knowledge of the same kind as the intellect gives, as, in fact, a kind of arbitrary intellect. Mr. Sully, for instance, has unhesitatingly attributed this view to Hinton, and points out that, while sense and intellect are homogeneous, the whole process from the one to the other being continuous, when we turn to the emotions we enter a totally new and unconnected region. We are compelled, therefore, to hesitate before giving our adhesion to the supremacy of the emotions viewed thus. But, if Hinton ever held it, certainly he has nowhere explicitly stated so strange a view of the function of emotion. Whether intellect and emotion are homogeneous may admit of question, but it can scarcely be said that Hinton ever made any assumptions in the matter. His error lay, rather, in endeavouring to give stability to an already valid psychological process by converting it into a metaphysical entity. It is one thing to say that there can be no true picture of the world without the aid that imagination gives; without conceiving it, for instance, as the phenomenon of an existence which is love or rightness. It is quite another thing to say that the world actually is, apart from the conception of the percipient, the phenomenon of any such existence. It may be doubted whether Hinton, like many thinkers of strong metaphysical tendency, ever adequately realised the vast distinction between these two propositions. The function of emotion, of *imagination*, however, as a great factor in the right seeing of the world, without which sense and intellect give but an incomplete vision, involves nothing of the homogeneity of intellect and emotion. And it is as an attempt—more or less clearly apprehended—to vindicate the legitimate function of imagination as the interpreter of scientific truth that Hinton's philosophy is of chief significance.

This significance, however, has clear limits. If the quality by which his work in philosophy is chiefly marked could be indicated by a single word it might be said that Hinton was, above all, a *stimulating* thinker. It is of little consequence whether you agree with him or not; his insights, his audaci-

ties, his analogies, even his absurdities, are admirable for compelling thought. He is to be studied rather than followed. He seldom recurred to definitions; it is doubtful whether he ever attempted to formulate what he meant by the "moral emotions"; and, as every conception he touched was constantly changing and growing beneath his hands, definitions would have been valueless. Remarkable as his syntheses are, he had little of that tendency to logical analysis which has generally been held in England to constitute strict thinking. But, as Goethe said to Eckermann, "all the thinking in the world does not bring us to thought; we must be right by nature, so that good thoughts may come before us like free children of God, and cry 'Here we are'." That was the way in which thoughts came to Hinton, so that altering them was to him, as he said, a kind of sacrilege.

We have now caught a few glimpses of Hinton's Platonism. It is scarcely necessary to defend the right to existence of a Platonic synthesis of the world. Like Positivism, Platonism stands for a certain way of envisaging the universe which can at no period quite disappear. Positivism, that view of the world which is born by a kind of parthenogenesis of Science alone, can upon special points always maintain its position; "yet it may be," in the words of Lange, "that the whole picture of the world which Platonism affords stands nearer to the unknown truth: in any case it has deeper relations to the life of the emotions, to art, to the moral functions of mankind". Hinton sought to vivify Positivism by contact with these things. He held that the Platonic process must be repeated in new relations. It must be admitted that this new Platonism exists more as a promise than a performance. The brilliant *imago* has scarcely yet emerged from the chrysalis. Hinton's imagination sometimes ran wild in the large liberty of metaphysics; his vision was not enough circumscribed to produce a good philosophical system; he saw things in too diffused a light to be able to arrange the shadows of a great and complete synthesis. If he had done no more there are but few to whom his work would appeal. But although one feels compelled to touch first of all on Hinton's philosophical conceptions,¹ he claims our attention more especially as a speculator in the sphere of morals. And it is not perhaps too much to say that as such, as a moral teacher, he is chiefly worth listening to.

¹ The reader who is interested in Hinton's philosophical opinions will find some technical appreciations, which are, on the whole, good though fragmentary, in Mr. Shadworth Hodgson's Introduction to *The Art of Thinking*, and in reviews by the same writer in the *Academy*, 14th Jan.,

He himself felt this, and during the last five years of his life ethical problems held the first—almost the sole—place in his mind. In his ethical writings we find the dawn of a direct simplicity, a clear grasp of reality, a patient study of facts which were not the most striking characteristics of his earlier metaphysical stage. He could not approach such questions as of purely theoretical nature; they appeared to him to touch the very life and being of society. To-day, when the interest taken in ethics generally is so great, when ethical problems come before us with an increasingly practical significance, it may be worth while to consider briefly what Hinton had to say on such questions.

Two distinct periods may be traced in Hinton's general position in regard to morals. In the earlier stage his ethical exactly corresponded with his metaphysical conceptions. As he thought that he found the key to the relation of man to the universe in the doctrine of the self as a negation, so in the same doctrine he saw the key to man's relation to man. The "one word" of his earlier ethics was *sacrifice*. A passage in his MSS. (written about 1858) well illustrates this transition from metaphysics to morals:—"How that idea of self-sacrifice (as the source of all life) is involved in the correlation of forces! 'Each force merging itself as the force it produces becomes developed,' says Grove. This is the very fact of creation, the exact statement of that self-limit which is creative action. And this is the phenomenal, the 'instinctive' view of Nature. This has an exquisite beauty; the instinctive view of Nature is the exact fact of creation, a force giving up itself that another may be. Well have I said that Nature, ever and in each of her changes, presents to us directly God's creative act; this chain of cause and effect is an infinite presentment to us of self-sacrifice. So Nature presents to us physical self-sacrifice, destined to be superseded by, interpreted into, moral self-sacrifice. Through necessity is physical self-sacrifice seen to be moral self-sacrifice." And we shall find that at this period, and indeed always, sacrifice is involved in Hinton's ethical conceptions. All life, he was never tired of saying, is a martyrdom. In the *Life and Letters*, as well as in *Philosophy and Religion*, we shall find reiterated with passionate emphasis the assertion that self-sacrifice is the

1882, and especially *MIND*, April, 1882. Reference may also be made here to an article entitled "The Hintons: Father and Son," by George Peard, which appeared in the *Contemporary Review*, May, 1878, and is remarkable for its critical insight, considering the limited nature of the data at the writer's disposal.

condition of happiness. Such an assertion has in all ages been found the expression of their deepest experience by men born with a genius for conduct.

It is to this phase of Hinton's thought that *The Mystery of Pain* belongs. *The Mystery of Pain* starts with the recognition of two great and undoubted truths: (1) the evil in man's life; (2) the unconscious element in all existence; and Hinton seeks to connect these two by affirming that the latter explains the former. The coldness of one we love, he argues, gives us pain, but were we to find that that seeming coldness conceals a real affection our pain would be no longer pain but joy. And if there should exist a cause which would explain all the facts which give us pain, that pain likewise would be no longer pain but joy. There is such a cause, says Hinton, but it is unknown. Therefore all pain, taking the word in its most comprehensive sense, may be looked upon as the working out of the redemption of the world, as martyrdom. It follows from this that the man in whom the enthusiasm of humanity is so strong that he devotes his life to the service of his fellows and also the man who is knocked down and killed by a passing cab are, one and the other, sacrificed for humanity. It is a consequence that may possibly be accepted by some, but it is necessary to point out at what cost we must accept such a conception of sacrifice, which robs martyrdom of all those elements of enthusiasm and renunciation which are its charm and its power. This vast increase of redemption rests, as Hinton insists, on a gigantic act of faith. It seems indeed that a fundamental misconception underlies *The Mystery of Pain*. It may be true that there is an unseen fact beneath all that we call consciousness. We are right, doubtless, in making use of the hypothesis of an unknown fact to explain such a phenomenon as sensation. But the question arises whether we are justified in bringing it in to explain pain, to explain, not the cause, but the purpose, of pain. For it cannot be said that the origin of pain, and the essential part it plays in the development of the individual and the species, are in need of any such mysterious explanation. It was against such teleological conceptions, as he remarks in *Philosophy and Religion*, that Hinton was always fighting, and having banished design at every point from the domain of the physical he seems in giving it this emphatic assertion in his psychology to have mistaken the tendency of his own thought. For he was never weary of repeating that the physical and the spiritual are one, and it is strange to find a thinker whose insight was often so penetrative, in his eager-

ness to gain what he thought a greater religious consolation, bringing this discord into his conception of the world. He has himself supplied what is at once probably a truer and a nobler conception of sacrifice:—"Sacrifice is good, but only when it is for service," traceable service, as latterly he always insisted.

Criticism, however, seems almost out of place in speaking of a book which, although it appeals to argument as much as to faith, is touched throughout by the glow of emotion, and finds its home, if anywhere, in the heart. One would not rob the gentle and sorrowful souls to whom it has brought comfort of such consolation as it may be able to yield. Earnestness, sympathy, suasion, it has unquestionably, and such qualities are good. Nevertheless, Hinton himself in after-days very well described what he has here done. "If we shut our eyes on that which *is*," he wrote, "and construct for ourselves some ideal heaven to satisfy the craving of our moral nature, we are making impossible to ourselves all true interpretation of the facts of human life."

It was not till some years later that Hinton modified his ethical conception. It would be more correct to say that he enlarged and completed it. The impulse to self-sacrifice, the renunciation of the individual desires to a something outside them which is greater, a something which, describing it by a word which denoted what they thought highest in themselves, they called a Will, men have always felt; and they have felt that that Will could be nothing less than Divine. But it is obvious that such a thought cannot become more than a very faint approximation to a guide to conduct; and even to that extent a guide as likely to lead in a false as in a true direction. The conception by which Hinton sought to supplement it may be described, like the earlier one, in a single word, and that word, *service*. By sacrifice he had meant the willing acceptance of pain, all thought of self being cast out; by service he now meant the acceptance of pleasure also, the thought being still not on the self; that is to say the acceptance of all things, either pleasure or pain, that *served*. Hinton did not claim, nor could it be claimed for him, that such a conception was new. But in many of its bearings it assumed in his hands a fresh significance.¹ When so venerable and familiar a word is

¹ It is obvious that he thus escaped at once the debates which centre around the word "happiness". Happiness must always be found, as Mr. Herbert Spencer has pointed out, in every ultimate analysis of the ethical end; but it does not therefore necessarily enter into the ethical aim. In

brought before us as representative of the ethical aim we fail at first to realise that it may connote conceptions which are unfamiliar. We have no thought that it may imply a disintegration of old ideals. But Hinton by asking of everything: Does it *serve*? made service involve nothing less than a complete revision of the old conceptions of virtue. Moral problems were placed on a new foundation, although Hinton claimed it as substantially that laid by Christ. Selfishness, the great deterrent from right action, is simply the absence of true regard. A true morals, like a true science, is only an accurate response to fact. Morality is not a matter of goodness but of true relation to facts—a relation which must be fluent, which cannot be rigid. "If two persons are hungry, another and I, and my feeling only responds to the hunger of one, it may, or it may not, be wrong, but assuredly it is untrue—as untrue as there being four of anything and my thinking there are but three."

It has very generally been held that service (or some similar conception) represents the true law of morals, but it is said that the law of service is embodied in certain rigid rules and institutions. The thought must be on good and also the action must be according to the rule; that is to say, there is both an internal right and an external right. It is at this point that Hinton separates himself from those who (as they believe, at least) accept the Christian theory of morals. It was, he said, a waste of energy. Two things were to be thought of when one was sufficient. And, as we see, practically it is not done; either the internal law is sacrificed, or the external, or both. The highest goodness of the accepted type becomes the luxury of the few. Viewing morals thus as a force to be treated dynamically, Hinton found that the natural moral law was really an easy one, and that if truly taught it might be followed by those who are now thrust outside the pale of virtue; it permitted that tendency to impulse and the free play of passion which is so largely engaged on the side of evil. For the throwing off of the external right is the liberation of a great new force; it means nothing less than the freedom of pleasure, of impulse. When the restraint is placed on the feeling the action becomes free. "There is nothing in restraint; no reason any pleasure, any impulse, should not be; and so the whole freedom of all joy. Only one thing must be, and always,

Hinton's conception the entire ethical aim was covered by service. Happiness cannot be attained by pursuit, said Mill. Or goodness either, added Hinton. Let your impulses respond to fact, and you attain both happiness and goodness.

never wanting." And that "one thing" is a true regard to facts. While *service* is the end which must be attained in a true moral action, the natural guide to service is impulse. "What I look to," said George Eliot, "is a time when the impulse to help our fellows shall be as immediate and irresistible as that which I feel to grasp something firm if I am falling." The best action is automatic. Hinton would agree with Mr. H. Spencer that "the sense of duty or moral obligation is transitory," representing but one phase of man's development; but while Mr. Spencer places such abolition of duty in that remote future when men shall be able to fulfil instinctively laws which are substantially those now accepted, Hinton would mean that a true regard to facts, a response to needs, would be both the natural impulse and itself the only law, to the abrogation of all other laws; and that this end was more readily attainable than the complex moralisation for which Mr. Spencer looks.

But the law of service was not merely easy, it was the natural law. An arbitrary rule, an institution, must be opposed to the fluency, the ever-changing relations, of nature and fact. There is nothing fixed in nature; there are laws of action or being, but no rules of things. To be rigid means to be dead. It is not possible to say of anything, Hinton argued, that it is always good or always bad. It must change with its relations. It is here that he shows the influence of his scientific training. No one trained in physical science could ever have regarded nature as Mill regarded it. Nature is the Devil, said Schopenhauer; to Hinton it to a great extent took the place of God. He almost constantly personifies it. It is Hinton's distinction that he is probably the first man of ethical genius who has been deeply and consciously impressed with the methods of science. It is true that Emerson, whose genius was so largely ethical, was singularly sensitive, as Professor Tyndall has so often insisted, to the scientific spirit. And Hinton has recorded his impression that had Emerson been trained in the methods of physiology he would have "interpreted the world". But it can scarcely be said that Emerson has opened up any new paths in moral science. It was not till within the last five years of his life that Hinton attained a comparatively final ethical conception. Previously his position had been fairly well described by the word "altruism" which many years previously he had eagerly adopted. Even in the little paper called "Others' Needs," published in *The Art of Thinking*, this altruism is quite distinct, and he never entirely abandoned the altruistic

phraseology. His latest attitude seems to have been the result of, if it was not coincident with, that careful collection of social and especially moral facts which during the last two years largely replaced theory in Hinton's MSS. These data are of considerable interest and will, when collected, be found of distinct value for the study of moral phenomena.

Altruism, therefore, gave place to the study of facts, apart from either others or self: "Think of others" became "Think of what is wanted". "The real power," he wrote during the last few months of his life, "is not in trying to think of others, but in thinking of facts, *in attending to the traceable*. By doing that, the transferring of the thought to others is brought. To think of others directly, instead of through the effect of thinking of the traceable, is really a delusion." Hinton still used the word "altruism," although the conception was slightly altered. To make it mean merely sacrifice, he said, is to make it absurd. That is "making oneself, and not the good of others, determine it". And even so early as 1871 he thus criticises what had been a favourite expression of his own: "Not the self cast out but its rule; it is as the sense-impression in thought remains for *use*; but knowledge *is* the casting out of its rule". The question was, not: What is the law? How readest thou? It was rather: What are the facts? What do those facts call on us to do? The major premiss in the ethical syllogism was always: It is natural to do what is wanted.

Hinton speaks very clearly regarding the present social condition. It would be difficult to surpass the occasional energy of his denunciations regarding the unnatural greed of wealth—a greed which, as he pointed out, would be recognised as such, and treated accordingly, in any other relation of life—and the sharply defined divisions of class. It was, however, in the present state of the sexual relations that he found most evil. The selfishness of monogamy and the home, the cruelty of virtue, the rigidity of arbitrary rules and feelings in regard to all such questions seemed to him unparalleled before in Christendom, or out of it. In the Protean evils which are grouped around that part of life Hinton found a *reductio ad absurdum* of the present morality. It was partly because the evil he saw was so intense, although chiefly because of the power here stored up and waiting to be liberated, that he felt that around the question of marriage the chief battle of morals would have to be fought. When that was won, when it was possible to follow traceable needs even there, everything would be won.

Hinton always said that he was enabled to reach this

latest and most important development of his ethical thoughts—the fluency of right—by the study of pictures. It was not till late in life that he became interested in art, and although he had a keen feeling for the art-process, he had little technical knowledge of painting. Indeed he possessed no true æsthetic feeling at all; there is probably not a single word in all that he wrote which indicates any sense of what he would probably call “thingal beauty”. He ignored things as well as individuals (as nature does), and saw all as processes, or parts of a process. Pictures were never a passion for Hinton as music was; but while he learnt little from music (and what he wrote about music occupies only a few pages) he learnt very much from painting. He saw the art of the painter as a great living process, true to the make of nature, and therefore (he would hold) to the make of man. The world of art was a world where all details are subordinated to the whole, where all truth is a truth of relation, where nothing exists by itself; a world where the conservation of energy rules, and where the best is the easiest. It is perhaps necessary to point out that Hinton chiefly occupied himself with landscape-painters, and especially with a group of artists who are marked by many features in common — Turner, Constable, Dupré, David Cox. The painter, as Hinton saw him, is bound to cast out the “self-rights” in everything he paints; he has attained perfect freedom from restraints, the right to do *anything*; and in doing so he is but following nature’s method. In seeing this Hinton saw implicitly the law for man’s action, and found it to be the explanation of morals, and one with the lesson of science. “It is the same in morals as in art. Truth is truth to nature; goodness is goodness of nature.” Life also is an art, the laws of which are revealed in the other arts. That art has always had a close relation to life Hinton found little difficulty in proving, and he endeavoured to trace out how a false moral code has never been able to exist at any great art-period, although the disintegration of the false morals has not necessarily meant the establishment of the true. “Morals cannot stand before a paint-brush. It never has; visibly it never can.”

It will be seen that to Hinton the change he foresaw came as the destruction of morals. It was the breaking down of all outside restrictions for the reassertion of the law on the heart. There is a passage in the Introduction to Taine’s *Origines de la France contemporaine* in which that writer enumerates those things in the abolition of which civilisation has consisted. With very few deductions the same passage

would also be a summary of those things which Hinton held to be not only permitted but necessary when the law of service is recognised. It must be pointed out, however, that this last result of Hinton's thought is clearly related to the thoughts with which he started. It is all contained in embryo in his earlier writings. This Hinton himself, though he was careless of consistency, especially insisted on. There is nothing so clear in his earliest thought as the doctrine, embodied in the word "Actualism," that the world is a process. It was easy to add that the external rule, the law of the letter, was "nothing in the world". He always held that the development of his thoughts was perfectly continuous, that *The Mystery of Pain* really contained the half of his whole moral thought. In that book he had tried to show that pain must be accepted at the call of good; all that remained was to see that pleasure also must be accepted. The two together formed his entire thought. It has been pointed out that his metaphysical thoughts gave him the first key to ethics. In the same way (he tells us) he found in his earlier ethics the key to understand art. It was because *The Mystery of Pain* had shown him sacrifice that he was able to see what art had to show him.

It is still necessary to say a few words in completion of this brief sketch of the chief lines of Hinton's thought, although in doing so we are returning to some of its earlier aspects. We have seen something of his attempts towards laying a scientific basis for religion; we have yet to see how he dealt with religion from the emotional and practical standpoint. It is here, where his scientific instincts are latent though still implicit, that Hinton's genius for religion is at its clearest, and that, speaking from his own deepest experiences, he shows himself at one with those of all religions who have most firmly apprehended the mysteries of the soul. It has been necessary to point out how indefinite and obscure Hinton's theology was; he would at one moment deny with intensity of emphasis the figment of a distinct spiritual world, and at another speculate, somewhat languidly indeed, about the possibility of "extra-human beings," argued from supposed traces of their influence on man's history. For the man who seeks to *know*, to co-ordinate the facts of the world around him in an intelligible whole, such inconsistencies are an unmixed weakness. But to the man who desires to *see*—and Hinton had sacrificed all to become "a power of seeing"—this indifference to paradox is an element of strength. As M. Renan says of the mingled theism, polytheism and pantheism of Marcus Antoni-

nus, all those shifting modes of thought are necessary to a true insight. The book of religion *par excellence* was for Hinton the Bible. He found all his own thoughts implicit in the Bible. But to do so he had not only to read between the lines, but the lines themselves under this process of interpretation sometimes vanished altogether. The Bible became a palimpsest. Had Hinton been familiar with the Talmudic and Alexandrian schools of exegesis and what results were rendered possible by their methods, it is difficult to imagine he would have fallen into a like maze of fancy. It is probable, indeed, that he actually realised its invalidity and in the "Autobiography" he compares his use of the New Testament to the use the New Testament writers made of the Old. The character of this method—which is so persistent throughout Hinton's MSS.—and its curious resemblance to that of the Fathers most touched by Gnostic influence may best be shown by an example. Clement of Alexandria finds that Abimelech looking through a window at Isaac sporting with Rebekah is a type of Christ, and asks:—"But what was the window through which the Lord showed Himself? Doubtless it was the flesh wherein He was manifested." This of Hinton's is parallel:—"Of the water of life freely'. Is there not something farther to be seen here? Why *water*? Which is the hydrogen and which the oxygen?" Or this, speaking of the analogy of spiritual action to the wind rather than to vapour, and how inspiration is a breathing:—"Does it not mean that balloons are not to be permanently a failure?" And again in the last year of his life he writes, in a passage less absurd but perhaps more characteristic:—"Thinking of the sacrifice of Isaac, observe: the bound thing is all ready to be slain; is on the point of being so; and so was not the 'reason' at the very point to be killed at the time of Copernicus? And this bound thing is—because so bound and ready to be slain—to have full dominion; it is to rule and rule perfectly. (So with the *emotions* now). And the 'ram' might have two interpretations; it might be the fact in Nature which gives the interpretation. Or is it rather the false attitude of mind, the yielding to sense-impressions, the not-regard?" But the insight is there nevertheless, and whenever Hinton abandons the search for a scientific metaphysics, the strange and fanciful exegesis, when he deals rather with what he called "affirmations of the moral sense," his words often attain with perfect sureness the expression of those aspects of the world which satisfy the heart. "The true aspect of religion," he says, "is not: Things are bad—take care;

but: Things are good — understand and know". And again:—"Religion is truly the home-feeling of the universe". And in words that at once justify and interpret the charm of Jesus he says:—"Is there not something beautiful in the thought that sin pertains to the individual and exclusively so—not to man? Only so deep as the isolated individuality extends can sin extend. And thus it is that sin can be 'washed away'; because it is superficial; because into the actual fact of man's being it does not enter. The sin has stained the self, not the *man*. And an entirely new thought of the world comes with this. Amid all this sin is the sinless Man; and we who are sinful are to be brought into one with Him. 'By Man came also the resurrection of the dead.'" He sees at once what the men in all ages who have been profoundly dominated by the religious consciousness have never failed to see, that man cannot be put in an emotionally right relation with the universe without undergoing a process of subordination. This renunciation of the self has never been found very susceptible of a scientific presentation; it involves, indeed, the converse of the scientific process. Science seeks to express nature in terms of man, and religion can find no rest till man is put in terms of nature, of the universal. Its affirmation is: "Fecisti nos ad te et inquietum est cor nostrum, donec requiescat in te". It is impossible to say this more clearly in the language of religion than Hinton has done. "If we were self-sacrificing," he says, "we should see that nature is self-sacrifice." And the self he defines as "the way we feel the absence of God". *Philosophy and Religion*, which is full of these flashes of insight, is especially marked by its insistence on this negation of the self as the only condition of joy and freedom. It is like Antoninus's acceptance of all things that come from nature, as coming thence whence we ourselves come. It is the *Theologia Deutsch*:—"Nothing is forbidden and nothing against God, but one thing alone, that is, self-will, or that man should will otherwise than the Eternal Will". It is Christ's:—"He that loseth his life for My sake shall find it". And what is the reward of this renunciation? Let us hear Hinton on this point also. It is joy and freedom, he asserts, that are the end of religion; self-sacrifice is only the condition, though it may be a condition that is often less, consciously, a condition than an end. "To the man who thus acts with Nature, failure is not nor can be. He does not succeed in life; his life is success. Even as Nature is not moral, because it is morality. Success

cannot have success, even as morality cannot have a moral. Success is yoked to his steps and cannot leave him ; nothing can bring to him other than constant good. Nothing should disturb such a man's equanimity ; for all wrongness and loss are nutritive, the means of higher ends. Whatever happens, my *Life* has been and is ; Nature has accomplished her ends, God has accomplished His ; and therein I mine. My will is done because and while it is one with *The Will*. This is success, to find, in all events, my *Life*."

No one who had so clearly realised the essential conditions of the religious life could fail to see the profoundly irreligious character of much of our popular theology. Hinton is perfectly clear as to what is and what is not of religion. The desire for a personal God, the desire for a future life—whatever value these conceptions may have had for humanity, whatever may be said about them as scientific truths—are not of religion. Love and self-sacrifice, rather than these, have ever been felt as the truly religious facts by those who have most clearly apprehended religion. And Hinton is never weary of insisting that it is not by any vision of a self-contained God that "salvation" is possible ; it is by love and self-sacrifice, the self-sacrifice that was supremely displayed in Jesus ; and it is towards man that the developed religious consciousness is turned. We have heard much of the scientific objections to the notion of "the magnified and non-natural man". But Hinton's revolt against a conscious and thinking God was emotional even more than intellectual. What he desired was a God to love more perfectly, more naturally. This God is the infinite God, Love ; the love of whom is love of Being, is eternal Life. "The heart delights in Love too great and pure to be personal." And he says elsewhere :—"He cannot be God that *can* be denied ; God must be such, the denial of Whom is a contradiction in terms". And when we do personify our God, it can only be in man. "Humanity is the Being, the object of love."

The modern character of Hinton's genius is nowhere more distinctly seen than in these religious utterances. Even at the moment of highest emotional inspiration—and indeed chiefly then—he never loses sight of reality. His religion is *natural* or it is nothing. It was the religion of one who had found no end worthy to follow by paths of science or paths of religion but Nature—that Nature whom he had "known so long and half loved and half feared and wholly served".

It is these gleams of immediate intuition into the heart of the religious emotion, standing clear for all those whose

experience has taught them to know it; it is his insight into the conditions of a moral law which is service and only service—these are the things that make Hinton's work significant. They are not less interesting from a something of paradox about them. He was a man of fine scientific sense with a joyous acceptance of all scientific advance, and there are accents in him which have the ring of Antoninus and the Catholic Mystics. He was brought up a Calvinist; there was an element of Puritanism, a thirst for martyrdom, ingrained in his nature; and, with passionate gaze set on the future, he saw, enfolded in the dynamical relations of modern society, the vision of a moral life which was at once perfect freedom and perfect good.

Hinton represents, as one individual is rarely permitted to represent, a process of complete transition. It is a process that goes on, one way or the other, in all ages of intellectual activity; we may see it in our own age. But in Hinton the process is epitomised. He illustrates the progress between two antithetical principles, between law and morality on the one hand, and freedom and impulse on the other. He began with saying that life is self-sacrifice and martyrdom man's destiny; he ended by also asserting the gospel of genius; "Pleasure is free; passion need not be restrained". This process of thought, the passage between these two principles, and their mutual reactions, produce a resultant which is an attempt towards the harmony of both and adds a charm to Hinton that is seldom found in any thinker. It is a process less frequently presented in thinking—the "art of thinking," as Hinton called it—than in art. In art, indeed, the transition from law to freedom is often traceable; in Turner, who was specially attractive for Hinton, it is very distinct. He found in art a clearer revelation of that new birth of freedom and impulse which was taking place within his own soul.

Hinton has been called a mystic; and if mysticism may be regarded psychologically as the union of new thought with emotion, or indistinct ancestral thought, probably he was a mystic. Whenever a sudden influx of intellectual life intrudes upon the more slowly growing spiritual life of humanity, men endowed with the immense enthusiasm, the free wide-ranging speculation, the power of fusing the incongruous elements of thought and feeling which Hinton possessed, are certain to arise. Such men may be in appearance widely separated. Joachim of Flora, who was so widely read at the Renaissance, and some of whose gnomic sayings are curiously like Hinton's, was probably a man of

this type in the 12th century. Diderot, the Pantophile, as Voltaire calls him, the Panurge and Prometheus, as Michelet adds, of the 18th century, held this position in regard to the French Revolution. But they are best seen in the 16th century, in certain men of the middle Renaissance, Leo Alberti, and (in their work) Piero della Francesca, Botticelli, Filippino Lippi. These men in their union of science and devotion and audacious impulse, in their curious mingling of Christianity and free thought, belong to the same class as Hinton. One can see something of Hinton's eager, versatile, inquisitive, yet child-like nature in his face. It resembles that of the best type of English labourer, expressing an immense capacity for work and enjoyment; with, however, something else superadded which is born neither of his intense and subtle intellectual energy, nor even of his emotional devotion to Nature. For if he has not the strangely keen and complete powers of Leo Alberti or the massive momentum of Diderot's intellectual energy, he has that which is even rarer and which finally distinguishes him from this whole class—his profound and pervading ethical instinct. We have seen something of the results which this instinct, guided by the scientific spirit of appeal to fact, and supported by what he believed to be the spirit of Jesus, had to say in face of the social facts of to-day. In reality Hinton was a product of his age; his conceptions and methods had a deeper root than he himself probably ever suspected. He was allied to three great influences which will perhaps be found the chief moulding forces of the latter part of this century.

Among these Science has every title to be first. Hinton never underrated his debt to Science, although he saw very clearly the danger of a narrow conception of Science, or an exclusive devotion to it. He sought to do in morals what, in an equally remarkable though less clear-sighted manner, Walt Whitman has sought to do in literature—to bring into life the new conceptions of human freedom and development, the new ideals of love and purity, which Science has made possible. He said that all he had seen was simply the working out in ethics of the conservation of force. It is probable, indeed, that this and the Darwinian laws (carefully avoiding the confusion commonly made between these and that philosophical doctrine of evolution from which they are in reality quite distinct) will occupy the same place in the next great movement of the race as Newton's law of gravitation occupied in France at the latter part of the last century.

How much Hinton learnt from Art, and how intimately,

he believed, the problems of life are connected with it has been already said, and it is a fact of great interest. We have seen too how singularly opposite in many points the gospel of Art that Hinton found was to that contained in the jewelled eloquence of Mr. Ruskin's fervent, if rather strained, moral analogies. Hinton's life covered nearly the same period as that of perhaps the greatest imaginative artist England has produced, and the last years of his life were synchronous with the appearance of that new æsthetic feeling which is only now beginning to come into life and which must necessarily be of slow development.

When Hinton wrote the various tendencies which we recognise collectively as Socialism had in England scarcely taken definite form. One who held, so strongly as he, that "overthrowing society means an inverted pyramid getting straight," would probably to-day, however, be classed among extreme agitators. And it was Hinton's desire, apparently even his distinct purpose, to make some attempt towards the formation of a new society, although he held that such must not be a merely individual effort. His attempts in that direction would have been characterised by insistence on the moral aspect of every revolutionary change. The aim must be true before the life can be true; but we must work *from without inwards*. The moral worth of the external change lies in its dynamic relations to the life of the spirit. The material and the sensuous have this incomparable significance, that they carry within them the force which can liberate the soul. It may be that some new birth of social life waits for us in no very remote future, and Hinton's immense enthusiasm and profound moral insight can ill be spared in the work of reorganisation. With the complete publication of all that he produced, these qualities will yet be found to set a final seal of fascination upon his life-work; and if we are approaching such a renaissance Hinton must be counted among its first prophets.

IV.—RESEARCH AND DISCUSSION.

FREE-WILL—OBSERVATIONS AND INFERENCES.

By FRANCIS GALTON, F.R.S.

The cases appear rare in which any of the numerous writers on Free-will have steadily, and for a long time together, watched the operations of their own minds, whenever it was engaged in such an act, and discussions on Free-will have certainly been much more frequent than systematic observations of it.¹ Consequently, for my own information, I undertook a course of introspective inquiry last year: it was carried on almost continuously during six weeks, and has been proceeded with, off and on, for many subsequent months.

As the results were not what I expected and as they were very distinct, I publish them, of course on the understanding that I profess to speak only of the operations of my own mind. If others will do the same, we shall be hereafter in a position to generalise.

My course of observation was that, whenever I caught myself engaged in a feat of what might fairly be called Free-will, I checked myself, and recalled the antecedents and noted any circumstances that might have influenced my decision, and forthwith wrote down an account of the whole transaction. After I had collated several notes I found that the variety of processes to be observed was small; I therefore discontinued my notes but maintained the observations, until I felt satisfied that I could describe as much of what goes on in my own mind as falls within the ken of its consciousness.

I may say that, after some preliminary maladroitness had been overcome, I did not find the task difficult, nor even irksome; not nearly so much as in other introspective inquiries I have made. It is true that facility in any kind of introspection is difficult to acquire; it depends on the establishment of a habit something like that of writing in the midst of avocations. When the latter has once been attained, the writer recovers the thread of thought that had been dropped at each interruption, and rarely finds it broken. So it is with introspection.

The word 'Will' is of course applicable to more acts than the word 'Free-will,' as it accompanies many that are obviously automatic. I did not occupy myself about these, of which I

¹ I only know of one such course, by Mr. Henry Travis, in MIND V. I did not read that article until after my own inquiries were finished. We do not cover exactly the same ground, and so far as we do our results differ.

will merely mention the chief, to show that they have not been overlooked.

All that depends upon constitutional tenacity of purpose is to be suspected of automatism. A man in whom this quality is conspicuous, is spoken of as obstinate. He is frequently likened to some brute animal, which shows that tenacity of purpose is not popularly considered to be of a high order of psychical activity. Thus an obstinate man is vulgarly said to be as obstinate as a mule or a donkey, or, more vulgarly still, as a pig. It is more proper to consider tenacity of purpose as antagonistic to freedom of will, as in a madman who is constrained by his monomania. A block of wood or stone gravitates obstinately, and if it were conscious of the act might be said to have tenacity of purpose.

The appetites are among the motives that automatically direct the Will, for it is proverbial that they make men their slaves. I did not trouble myself with any acts that were determined wholly by them.

Lastly, I did not care to trouble myself with cases in which two motives of the same kind were in conflict and the greater prevailed. There is no more anomaly in these than there is in the heavier scale-pan of a balance descending.

The events with which I did concern myself were those in which feelings of different quality had been in opposition, as when the appetites or passions had been thwarted by alien influences, and I endeavoured to infer from a comparison with past experiences, how far the issue of each contest had really at any time been doubtful.

I began my observations under the belief that I should be seriously embarrassed by their number and frequency, and I spent much preliminary thought over different methods of dealing with otherwise overwhelming multitudes of data. I was also prepared to find that the origin of the motives by which my Will was determined, lay usually too deep to be reached without severe and persistent effort. Great then was my surprise in discovering, after I had fairly entered upon my observations, that the occasions were rare in which there seemed room for the exercise of Free-will. I ultimately reckoned that the rate of occurrence of such interesting cases, during the somewhat uneventful but pleasant months of a summer spent in the country, was less than one a day. All the rest of my actions seemed clearly to lie within the province of normal cause and consequence.

It will of course be understood that I do not commit myself to the absurd assertion that I was able in any one case to record every convergent motive and the history of each of them, how it was induced by such and such circumstances, and these again by others, and so on *ad infinitum*; but I mean that, in whatever one direction I cared to follow the track backwards, I found it to be continuous and orderly until it led to a tangle of familiar paths

whose issues were well known. I believe however that, if I had undertaken the inquiry in youth, when the number of my past experiences was only a fraction of what they now are, I should have found it much less easy to persuade myself of the frequency with which I act as an automaton.

After these prefatory remarks, I come to the results. It will be best to begin with what I observed to be the usual conditions of irresolution. When I was distressed between opposite motives and the Will delayed to act, my irresolution seemed due to one or other of two or even three states, sufficiently different to be described separately, though having much in common.

The first was that in which each of the alternative plans became less attractive the longer it was looked at, until it grew indifferent or even repellent; then the attention lapsed to the other alternative; and so it swung to and fro, incapable of wholly fixing itself upon either.

The second was due to a fitfulness in the growth of the desire to change, accompanied by frequent retrogressions, and to an equally fitful waning of the wish not to change. The resolution was delayed until a considerable rise of the new desire corresponded with a sudden fall of the old one. Without caring to specify grandiose examples, I may say that in the daily act of waking up and rising in the morning many instances of this occurred.

The same process of rising afforded excellent illustrations of a third form of irresolution, which is, I think, of especial interest. The conditions I have in view are—no particular call to get up, a comfortable bed, and a disinclination to leave it. My mind is then nimble and much more than half-awake, and I have a general sense of complete adaptation to circumstances, but a faint voice, as out of a different condition of things, preaches to me the merits of early rising. To this I may give intellectual assent, but, before it is possible for me to will to rise, the Ego that is subsisting in content must somehow be abolished and a transmigration must take place into a different Ego, that of wide-awake life. What I mean, is well expressed by the colloquial phrase of "turning over a new leaf". The mind is shifted into a new position of stable equilibrium, and it is just at the momentary heave of tumbling over into it, or, as it is sometimes expressed, at the moment of "making up the mind," that the wrench of will is felt. There is a somewhat similar sense of discomfort when a visual object has been interpreted in a particular fashion, and suddenly a different interpretation of it is forced upon us. The simplest example of this is found in the successive ways in which we apprehend a system of dots disposed in parallel lines and at equal distances apart. We may view them in lines that are either horizontal, sloping from left to right or from

right to left, or vertical. After looking at them in one aspect, another unexpectedly forces itself upon us, and at the same moment we have a slight sense of discomfort. In other examples the discomfort is more severe and amounts to a mental wrench, though much less acute than that which accompanies the "turning over of a new leaf," because the emotions are hardly engaged.

The conditions under which the "transmigration" of which I spoke took place, were various. Sometimes it was due to the momentary triumph of the waxing over the waning desire. Sometimes a velleity produced a will by aid of an artifice, seen through but not regarded. It did trigger-work only, neutral as regards the immediate future but which, like lazily pulling the string of a shower bath, produced an abundantly awakening effect after a short interval. The determining cause of the Will to rise was sometimes a slight accidental stimulus. On one occasion it consisted of two very light taps against the window, caused by something blown against it. This aroused no special association but was as effectual as any other slight sense-stimulus might have been, to rouse the sleepy Will.

I suspect that much of what we stigmatise as irresolution is due to our Self being by no means one and indivisible, and that we do not care to sacrifice the Self of the moment for a different one. There are, I believe, cases in which we are wrong in reproaching ourselves sternly, saying "The last week was not spent in the way you now wish it had been," because the Self was not the same throughout. There is room for applying the principle of the greatest happiness to the greatest number; the particular Self at the moment of making the retrospect being not the only one to be considered.

I will now speak of instances in which incommensurable motives had been pitted together and the one that was not the most keenly felt, nor gave the greatest pleasure in any sense of the word, emerged triumphant. Here is a case of a very common type which shows how easily a very feeble voice of conscience may win. I condense it out of my note-book, changing details for obvious reasons.

"An acute sense of annoyance and irritation came over me as I thought of some interests of mine that had suffered owing to an old friend's having neglected to read a letter with ordinary attention, he being, as I knew at the time, much engrossed with his own business. Then the thought arose 'So much irritation is unjustifiable; he certainly did not mean ill, and he has on past occasions helped me much'. There was no emphasis in the mental expression of this thought, nevertheless I felt sure from vague memories of past experiences that it was bound to prevail. It did so, by gradually cutting off the supply of irritation. The angry feeling however broke out after an interval, and was twice

exorcised subsequently by the same process ; so I had a threefold experience."

Here the opposition occasioned no struggle, and was accompanied by no balancing of pleasures and pains. A passionate feeling was quieted by a consideration that was almost unfelt. It was annihilated by turning off, as it were, some tap at its source. I do not say that if I had yielded to the sense of irritation I might not have subsequently felt pains of remorse, but that has nothing to do with what actually occurred. I am sure that I did not consciously discount the contingent remorse, and balance its present proceeds of pain against the present pleasure of indulging in anger.

Habit is another colourless influence that obtains easy victories. We are so drilled by social life that we perform, as a matter of course, multitudes of acts that a solitary being governed by his likes and dislikes would think preposterous. Here is an example of one of these common cases condensed out of my note-book, with changed details as before.

"An imperious old lady, infirm and garrulous, called at my house just as I had finished much weary work and was preparing with glee for a long walk. Hearing that I was at home, she dismissed her carriage for three quarters of an hour, so I was her prisoner for all that time. As she talked with little cessation, I had full opportunity for questioning myself on the feeling that supported me through the infliction. The response always shaped itself in the same way, 'Social duties may not be disregarded ; besides, this is a capital occasion for introspection'."

Leaving aside the last clause of the reply, we see here, as before, how a keen desire may wither under the influence of something about which our consciousness is scarcely exercised ; some one of the many habits, whose quiet and firm domination gives a steadiness and calm to mature life that children cannot comprehend.

Those who find a difficulty in understanding how a feebly felt mental action can vanquish a strong desire, will find the difficulty vanish if they consent to assume a physiological and not a psychological standpoint. The gain is as great as that of viewing the planetary system after the fashion of Copernicus, instead of that of Ptolemy. There is nothing contrary to experience in supposing that conflicting physiological actions may be perceived with a distinctness quite disproportionate to their real efficacy. We may compare the conflict between faintly perceived activities of one kind and clearly perceived activities of another kind, to that between troops dressed in a uniform scarcely distinguishable from the back-ground with others clad in staring scarlet. We must be content to admit that our consciousness has a very inexact cognisance of the physiological battles in our brain, and that the mystery why apparently weak motives of one class

should invariably get the better of apparently strong motives of another class, lies wholly in the word 'apparently'. In short, that the appearances of their relative strength are deceptive.

The remaining difficulty connected with Free-will seems also to depend on the word 'apparently'. It is the startling spontaneity with which some of those ideas that determine the Will seem to arise. These sudden presentations belong to a large category of cases of which hallucinations are the most striking examples. These ordinary accompaniments of insanity occasionally occur also among the sane, and may consist of voices denouncing, exhorting, or conversing in grammatical and well-turned sentences, or else of apparitions undistinguishable from real objects. A similar spontaneity, though in a far less marked degree, characterises all our thoughts. Most of our ideas are partially shaped when they are first consciously perceived, and frequently they are fully shaped. Thus, a versifier, having the jingle and run of a just completed line in his head, may produce a second line at a single birth, that shall rhyme, scan and make sense. I have elsewhere¹ pointed out a close and instructive analogy between the process by which completely shaped ideas probably arise, and that by which "fire-faces," as they are sometimes named, are certainly formed. I mean by that word those well defined faces, landscapes or other pictures, that most persons are apt to trace in the red hot coals of the fire, in the clouds, or in the patterns of wall paper. A part of the mind, unconsciously, and frequently against subsequent judgment and will, is found to have been struck by some chance-lines or sequence of points that serve to suggest a picture. It has ignored everything that does not conform to the unconsciously suggested image and has fancifully supplied whatever is deficient. Sometimes this imaginative process is slow and may be watched in operation, sometimes it halts and we wait for it, but usually it is quicker than thought, and the face, or whatever it may be, starts before our consciousness in its perfected shape, just as an hallucination.

This curious property of the imagination to be set a-going by a trifle and to run on by itself in fanciful directions to extravagant lengths, and to end by forming pictures that are complete even to minute details, must be accepted as a fact, for which it is not difficult dimly to see a rational interpretation. Even a kaleidoscope, which consists of only two small strips of mirrors, is adequate to compose an indefinite number of tasteful and complicated patterns out of glimpses of bits of coloured glass, tossed into haphazard arrangements. Much more may we suppose that the brain, whose structure is enormously complicated and acted on by organic memories as well as by present stimuli, should be capable of doing a vast deal more and something of the same

¹ *Inquiries into Human Faculty*, p. 170. Macmillan & Co., 1883.

kind as the very simple but suggestive instrument, the kaleidoscope.

Leonardo da Vinci and Turner both recognised the need of the imagination for something to work upon, for they, and doubtless very many other painters have done the same, systematically watched chance-groupings of objects to gain pictorial suggestions. This "something" need not be external; it may be due to any casual activity of a part of the brain, set in motion by causes alien to that connected series of physiological actions of which the previous chain of thought was the psychical counterpart. These alien causes may be of innumerable kinds, ranging from what might be described as mere fidget, to the results of grave lesions, the consequence of accident or disease.

In illustration of what I mean, I give the following example of a visual hallucination being traced to its origin. My correspondent wrote to me at length about two classes of mental imagery to which she had been subject for at least 16 years. The one was always present in the dark, when she closed her eyes. It was an assemblage of rapidly moving dots with occasional specks of light. The other occurred at the moment of waking, and was seen behind the still closed lids, though sometimes it persevered like a real object after the eyes had been opened in full daylight. It took the form of some beautiful pattern either of lacework or rich carpetry, full of elaborate details. Then she goes on to say:—"Well, one morning I discovered how these patterns were formed. When I awoke but kept my eyes shut, I saw a confused mass of little dots, shapeless but rapidly moving; suddenly they separated into lines at regular intervals, then followed cross-lines forming diamonds, and in an instant there was the pattern of a carpet, with clusters of roses and leaves at the points, and a smaller rose at the side."

I infer that audible hallucinations and every other form of sudden presentation, every new idea, have an analogous source to these visual ones. Moreover, as the imagination works in obscure depths out of the usual ken of consciousness, there seems reason for supposing that the "something" upon which it works may in most cases be equally beyond its view. It is also certain that those who introspect, and those who study the genesis of dreams, succeed in discovering plain causes for numerous images and thoughts that had seemed to have risen spontaneously.

If these explanations are correct, as I feel assured they are, we must understand the word "spontaneity" in the same sense that a scientific man understands the word "chance". He thereby affirms his ignorance of the precise causes of an event, but he does not in any way deny the possibility of determining them. The general results of my introspective inquiry support the views of those who hold that man is little more than a conscious machine, the larger part of whose actions are predictable. As regards such residuum as there may be, which is not automatic

and which a man however wise and well informed could not possibly foresee, I have nothing to say, but I have found that the more carefully I inquired, whether it was into the facts of hereditary similarities of conduct, into the life-histories of very like or of very unlike twins, or now introspectively into the processes of what I should have called my own Free-will, the smaller seems the room left for the possible residuum.

VISUAL HALLUCINATIONS IN HYPNOTISM.

By ALFRED BINET.

I offer the following summary of experiments made upon five hysterical girls at the Hospice de la Salpêtrière in Paris ; having treated the subject at greater length in the *Revue Philosophique* of last May.

Visual hallucinations verbally suggested in the somnambulist stage of hypnotism fall under the following rule :—The imaginary object is perceived under the same conditions as a real one (Ch. Féré).

(1) The hallucination is suppressed by a screen, like the external view of a real object. Some patients, however, continue to experience the hallucination in spite of the screen placed before their eyes ; but we may be sure that in these the view of real objects is subject to the same conditions, and also continues in spite of the screen. Further, attentive observation shows that in this case it is upon the screen that the subject projects the hallucinatory image.

(2) The hallucination naturally takes the bilateral form, like external vision. In the absence of special suggestion the subjects perceive the imaginary object with each of the two eyes as if it were a real object.

If the patient has one eye colour-blind, this eye, which cannot see real colours, is equally incapable of seeing imaginary colours ; coloured hallucinations cannot be suggested to this eye.

It was the same in a case of spontaneous hallucination observed in an hysterical mad woman. She always saw at her left side a man dressed in scarlet ; when this patient's right eye was closed, and her left eye, which was colour-blind, alone remained open, the man in question appeared to her grey and enveloped in clouds.

This rule is, however, by no means absolute. There are hypnotics to whom coloured hallucinations can be suggested through their defective eye. The loss of the sense of colours results from a paralysis of cortical origin, and we can see that the verbal suggestion may overcome this paralysis in certain patients and fail in others.

(3) Mechanical pressure of the eye doubles the hallucination (Brewster's experiment).

(4) A prism placed before the more normal eye doubles the hallucinatory image and makes one of the images undergo a deviation in conformity to the laws of optics (Ch. Féré's experiment). Even when the subject is colour-blind with one eye the two images show the same tint (Parinaud's experiment). I have observed in the hysterical mad woman above-mentioned that the deviating hallucinatory image was surrounded by a band of prismatic colours; the patient declared that she saw two Grippeaus (the name she gives to the individual who appears to her) and that one of them was *surrounded by a rainbow*.

(5) A spy-glass removes or approximates the imaginary object, according as the object-glass or eye-piece of the instrument is placed before the patient's eye. This effect is only produced when the glass has been properly focussed for the sight of the subject, just as if a real object was to be looked at. A myopic and an emmetropic subject cannot make use of the same glass without accommodation to the sight of each. The glass which has not been focussed plays the part of a screen, and consequently suppresses the hallucination for certain patients, and leaves it as it was for others, according as the screen produces one or the other effect upon them.

The experiment of the spy-glass may be varied in a thousand ways by employing instruments in all of which the action depends upon the refraction of light, as the magnifying glass, the prism, a double-refracting crystal, the microscope, &c.

(6) A mirror reflects the hallucination and gives a symmetrical image of it. All that is necessary for this is to get a reflection of the point of space which is the seat of the hallucination. To bring out the symmetrical character of the reflected image, it is a good plan to give the subject the hallucination of a portrait on a sheet of paper; suppose, for instance, that the profile of the imaginary portrait is turned to the left. When the sheet of paper is placed before the mirror, the subject sees the same portrait, but the profile appears to be turned to the right. If for the portrait written lines are substituted, the characters in the mirror appear reversed from right to left or from top to bottom, according to the position in which the paper is placed before the mirror. This last experiment is delicate and requires a certain practice.

(7) The hypnotic hallucination of the somnambulist stage is complete; in the absence of a suggestion to the contrary it engages all the senses.

These experiments in hypnotism serve as an introduction to the study of mental pathology. It is interesting to try to repeat the same experiment on the spontaneous hallucinations of the insane. Unfortunately, it is rare to meet with visual hallucinations so persistent that we can study them directly without being

obliged to have recourse, as is too often the case, to the report of the patient. Visual hallucination is only developed in the acute states.

I invite specialists who may have occasion to observe cases of hallucination of sight either in hospital or in private practice to seize the opportunity of repeating these experiments. After having carefully determined the nature of the malady, of which the hallucination is a symptom, the nature of the imaginary object and its position, the doubling by ocular pressure might be tried. If the attempt succeeds, it is more than probable that the other experiments (prism, spy-glass, mirror, &c.), would also succeed, for they are all connected like a series of theorems.

But it does not seem that every hallucination can be doubled by ocular pressure. Negative results should therefore be recorded as carefully as positive results, because equally interesting. More especially, I am inclined to think that unilateral hallucinations and those which move with the movement of the eye do not admit of being doubled, approximated, reflected, &c.

I shall be happy to receive communications on this subject (addressed to 44, Rue St. Placide, Paris).

THE REGENERATION OF LOST PARTS IN ANIMALS.

By D'ARCY W. THOMPSON, B.A., Trinity College, Cambridge.

The question of the Reproduction of Lost Parts is interesting from several points of view in biology; and many new facts have lately been added to our knowledge of it, which bear closely on the philosophical side of the question. They seem to me to have an important bearing on such speculations as Mr. J. S. Haldane's, who makes use of the phenomena of regeneration of lost parts in his recent article on "Life and Mechanism," in *MIND* XXXIII., as he has done elsewhere before.¹ And if they do not remove the difficulties that Mr. Haldane brings prominently forward, they at least seem to push them back to another stage.

Before dealing with Mr. Haldane's position, it will be well to review briefly the facts of the case.

In last century, when Trembley showed that the piece of a divided and subdivided Hydra grew again into perfect hydræ, such a proceeding seemed wholly new and extraordinary, and excited the intensest curiosity. It was said to upset all previous notions of the 'individuality' of the organism. Crowned heads grew interested, ambassadors sought for the animal, and state-couriers carried it through Europe.

¹ *Essays in Philosophical Criticism*, p. 54: "Relation of Philosophy to Science".

Other Cœlenterates, Actiniæ and Medusæ, show the same power of recovery of lost parts, or of being multiplied by artificial section : and the practice of cutting up living Sponges and placing the pieces again in the sea has been recommended as a valuable means of multiplying commercial species.

The power of regeneration in Echinoderms is as strongly marked as in Cœlenterates. The halves of a Starfish torn in two develop new arms, and become completely restored ; while even a single amputated arm buds out a body and new arms, and becomes an entire and perfect starfish. If the disc of an Ophiurid be torn across, the halves become similarly regenerated, but the single arm of an ophiurid cannot develop into an entire animal. The diverticulum of the gut, present in the Starfish arm, but not in that of the Ophiurid, seems to be necessary to effect the nutrition of the part during the process of restorative growth. In like manner, a single amputated tentacle of Hydra is not able to reproduce the body of the animal. In Echinoderms we find the capability for regeneration coupled commonly with the habit of voluntary fission. Every collector knows how hard it is to prevent live Brittle-stars from falling to pieces, and a well-known and characteristic passage in Edward Forbes's *British Starfishes* describes the same inconvenient tendency in Linckia. In the last-named and some other genera Kowalevsky, Simroth and others have described fission as a usual mode of reproduction.

In Worms of many different families, like phenomena occur, though here our knowledge is limited to the effects of transverse fission. Nearly 150 years ago, Bonnet instituted experiments on an Oligochaete worm, *Lumbriculus variegatus*, which have been recently repeated and extended by Dr. C. Bülow.¹ Even a few segments of this worm, taken from the middle of the body, and possessing neither mouth nor brain nor sense-organs nor anal aperture, develop into a perfect worm provided with all those organs. And the new worm is just as safely susceptible of division as the old. Bülow has also shown that *Lumbriculus* reproduces by asexual fission under natural conditions. Regeneration-experiments by Bülow on Gephyrea (*Aspidosiphon* and *Phascolosoma*) are described in the *Biologisches Centralblatt* for March 1, 1883. In these worms the mouth, tentacles, hooks and circum-oesophageal nerve-ring were found to be quickly restored after amputation.

Zeppelin has carefully described the mode of fission in *Otenodrilus*.² In this worm a constriction appears, which deepens until the animal is cut in two ; and it is not till some time afterwards that the head of the one individual or the tail of the other begins to develop. The case is different in several polychætous Annelids, e.g., *Myrianida*, where a median body-segment develops eyes,

¹ *Zeitsch. f. wiss. Zool.*, xxxix., pp. 64-96, 1883. *Arch. f. Naturgesch.*, xlix.

² *Zool. Anzeiger*, vi., No. 130, 1883.

tentacles, and the other characters of a 'head'; and fission only then takes place, when the two halves are ready to begin independent existence in a comparatively perfect state.

In Arthropods and Vertebrates the capacity for regeneration becomes restricted to the less important organs, such as limbs or tail.

M. Léon Frédéricq,¹ has lately given us an accurate account of the way in which crabs or lobsters voluntarily relinquish their limbs in self-defence, just as a rat is said to bite off its paw to escape from a trap. And a lizard leaves its tail in our fingers, knowing well that it will soon get another. The perfect regeneration of an amputated limb in newts is another well-known case.

So far the facts of this recapitulation are for the most part well-known and familiar, but our knowledge of them has lately been advanced in two directions. We have acquired important new facts, first as regards the histological processes of regeneration, and secondly as regards the precise characters of some regenerate organs.

The crucial point in the former half of the subject is the resemblance of the processes of regeneration to the original phenomena of embryonic development: in the latter, the important new fact is the occasional indication of reversion to a primitive type in the new-formed organ. Bülow has lately studied the histological structure of the growing tip of the tail in *Lumbriculus variegatus*. The hindmost of a series of transverse sections made through the anal extremity of the worm showed two cell-layers only, the ectoderm and endoderm: sections slightly anterior to these showed the development of a mesoderm, by proliferation from the point of junction of endoderm and ectoderm, exactly as in its embryonic origin.² The nerve-ganglia or commissures of the central chain are developed from the ectodermal layer: the gut from endoderm; the muscle-plates, segmental organs, liver-cells and vascular system, from the mesoderm. The ambulatory bristles are formed from ectoderm, but their musculature is mesodermic. The whole process is conspicuously similar to or identical with the development of the embryo, and Bülow even talks of his posterior sections, with their endoderm and ectoderm, as constituting a two-layered 'gastrula'. It is not that the organs already formed are growing bigger or multiplying by subdivision, but, from the origin of the mesoblast to the construction of complex organs, all is going on upon an embryonic plan.

Bülow extends this result to the case of regeneration. In a divided worm, he says, the tail is regenerated from cell-layers developed in the same way and exactly equivalent to the three layers of the embryo.

¹ *Arch. de Zool. expér.*, (2) i., p. 413, 1883.

² *Zeitschr. f. wiss. Zool.*, loc. cit.

Fraisse¹ has in like manner shown that, in the regenerating tail of a Urodele Amphibian, the histological processes are exactly comparable to those of embryonic development; though we cannot talk of a 'gastrula' in this case, as the faculty for regeneration does not extend to the cloaca. (Of course, as Fraisse points out, the details of the process of regeneration are in many cases somewhat modified and have their embryonic features marked by altered circumstances.)

Semper² had noted, some years before, the affinity between the phenomena of budding in *Nais* and the process of embryonic development; and both he and Bülow have traced an intimate likeness between the processes of budding and regeneration of organs.

These observations have, I think, a philosophical even more than a morphological importance, but to that point I shall return.

Reversionary characters in regenerate organs have been described in the case of certain Crustacea by Fritz Müller.³ For instance in *Atyoida Protomirum*, a species of Prawn, a mutilated chela is sometimes replaced by one not of the form characteristic of the species, but resembling that found in *Carodina*, an allied genus. The claw in *Carodina* is simpler and apparently more primitive than in *Atyoida*, for the bristles that it bears are short and small, and it is not hollowed out and spoon-shaped as in the latter. In the same crustacean, the fifth pair of feet are peculiar, and are distinguished from the adjacent ones by the want of certain movable bristles, and by the presence of a brush of hair on the last joint. But when amputated, these feet are restored on the normal pattern of the others, though in course of time after a succession of moults they recover their own distinctive characters.

Very similar, if somewhat less striking, results have been obtained by Fraisse,⁴ from experiments on lizards. He finds that, especially in *Lacerta muralis* and in Geckos, but also in our common *Lacerta agilis*, the regenerate tail is commonly darker in colour than its predecessor. And transverse sections show that this darker tint is not due merely to the transparency of the young epidermis rendering the dermal pigment more plainly visible, but that the pigment encroaches upon the epidermis, occupying the interstices between its cells, so that the dermal chromatophores are well-nigh hidden. And the epidermis is found also to contain pigment-cells, such as occur in the embryo, but not normally in the adult. In course of time the pigment vanishes from the epidermis, and the lizard regains its proper hue. The

¹ *Biol. Centralblatt*, iii., No. 20, p. 821, Dec. 15, 1883.

² "Verwandtschaftsbeziehungen der niedern Thiere," iii. *Arb. aus d. Inst. Zool. Würzburg*, iii.

³ *Kosmos*, viii., p. 388.

⁴ *Biol. Centralblatt*, loc. cit.

so-called 'blue lizard' of Capri, *Lacerta Lilfordi*, has normally a large amount of pigment present in its epidermis, to which it owes its dark colour, and in this species a regenerate tail acquires and retains permanently a darker tint than the rest of the body. Now Fraisse suggests (in direct antagonism to Eimer's view) that this darkening of the regenerate member is a case of reversion, and that the presence of epidermal pigment is an ancestral character. He supposes that the gradual imitative adaptation of colour to habitat was gradually obtained by the advance (or return) of the black chromatophores from the epidermis into the cutis.

We have thus traced in the phenomena of regenerative growth, a tendency to the attainment of the required end by a repetition of embryonic processes; and also a marked tendency to the recapitulation of phylogenetic history.

To return to Mr. Haldane. Proceeding on a philosophical doctrine of the relation of the categories of mechanism and teleology, he argues against the current physiological assumptions regarding the nature of life, which take it to be explicable or at least conceivable as a manifestation of mechanism or an effect of definite physical causes. And he makes use of the phenomena of regeneration of lost parts in contending that we must sublimate our view of the nature of life from a mechanical or cause-and-effect category to a category of reciprocity, and from that further to one in which the parts must be regarded as determined in relation to an idea of the whole; in other words that organic processes cannot be reduced to series of causes and effects, or to what is the same thing, matter acting as a vehicle of energy. If a newt's limb be amputated, whether the line of amputation be transverse, oblique, or irregular, and at whatever point it be taken, the cells concerned in the process of regeneration succeed in accurately reproducing the limb. They do not do their work blindly, but, allowing for new and inconstant circumstances, adjust their behaviour to the exigencies of the case. In this phenomenon, Mr. Haldane sees a certain 'purposiveness,' a relation to ultimate function, which cannot be due to the action of mere neuro-muscular or intra-cellular mechanisms. And unless we are to assert the existence within the organism of phenomena altogether different from those outside it, we must acknowledge a *force* connecting generally the organism and its surroundings, to which is subordinated the force governing the motions of the animal.

On this phenomenon of the regeneration of a newt's limb, and on certain apparent evidences of elective volition in the earth-worm, Mr. Haldane builds his argument, and he builds it strongly and carefully. But I think that the facts stated in this paper have a very important bearing on philosophical speculations such as his. For we have seen that histologically the renewal of a

lost part is but a recurrence to embryonic processes, a re-travelling of a familiar road : and not an independent present effort of the cells to mould themselves in conformity with function—an immediate manifestation of reciprocal interaction between the tissues and their surroundings. And the already described instances of retrogressive tendencies point to the same conclusion.

In all the processes of growth and evolution as well as of repair and regeneration, we are forced to acknowledge that the cell is influenced by something akin to habit or custom, by some tendency to do as its ancestors have done before ; and the most complex cell-divisions and most wonderful fabrications of organic mechanism seem but the indication of perpetual bondage to an eternal routine. And many of the phenomena of regeneration, of budding, and of parthenogenetic reproduction seem to indicate that it is but a sort of accident, not the defect of a peculiar attribute, that prevents any single cell of an animal from reproducing the entire organism.

I will give one concrete instance of what I mean by the tendency of growth to persist in accustomed and long previously determined lines.

I believe that the forms of the surfaces of joints are determined by strictly mechanical causes ; that if our limb-bones were only roughly blocked out in soft cartilage, their extremities would tend in the course of action to assume the shape that they actually possess ; convexities and concavities would be modelled out where we actually find them. But in the foetus *in utero* the motionless limbs acquire passively their proper conformation ; and they do so because a certain stereotyped behaviour has been stamped into their tissues ever since the time when that behaviour was directly influenced by mechanical forces.

Mr. Haldane, however, would probably deny that all this really affects the validity of his speculations ; and very likely it only limits their range. For though we bring in with some show of proof the hypothesis of old habit to account for the cells dividing in such a manner as to reproduce the newt's lost limb, yet something further is needed to account for its accurate regeneration when the line of section is oblique or irregular. We cannot but see that the procedure of each cell is regulated and conditioned by the needs of all the rest. Whatever histological or protoplasmic continuity there may be between cell and cell, we may dimly fancy some system of forces interconnecting them, which dynamical system may be again reciprocally influenced by the conditions of the outer world.

"WHAT IS AN EMOTION?"

By EDMUND GURNEY.

Professor James's recent discussion of this question (MIND XXXIV.) was from any point of view most excellent reading. If it were possible to regard a paper so full of true observation otherwise than as an admirable piece of serious work, it would still be open to one to applaud it as an extremely good joke. Not that I should be inclined to join issue with the writer at the point where he himself presents his doctrine in a humorous light. I am able, or all but able, to swallow the statement that, when I meet a bear, I feel afraid because I tremble, instead of trembling because I feel afraid—that I am angry because I strike a rival, instead of striking him because I am angry; and Prof. James has certainly brought out with characteristic clearness and picturesqueness the very large part which the bodily sensations of the skin, the muscles, and the viscera, may play in what we call emotion. But it is hard to follow his argument that *all* emotion may be resolved into such sensations without a feeling of amused resistance; and if one seeks some immediate justification for this feeling, his own crowning case may surely save one all trouble. There we find a lady, who was suffering from extraordinary loss of sensibility over the whole surface of the body, quoted as a crucial instance of concurrent *emotional insensibility*, because she had lost delight in her ordinary occupations and in her family affections. Yet, reading her own words, we discover that she was all the time a prey to *emotion of the most poignant kind*, and spent her life in agonised rebellion against its strange conditions.

This, however, is beginning at the end. Let us first glance at the emotions to which Prof. James's theory may seem completely, or almost completely, to apply. It is not hard to see what they are; and the ground of their peculiarity is practically supplied by Prof. James himself. *Fear* and *rage* are perhaps the most prominent examples. In such cases, the relation of the organism to some particular feature of the physical environment, which evokes the passion, is exceptionally close and direct; and it is inevitable that the mere sense of the bodily reaction should make up a large portion of all that is felt. The civilised man is here within a measurable distance of the lowlier creatures whose tissues contract at the touch or approach of an alien body; where if we can conceive any true *psychical* reaction to take place, the *sense of contracting* would undoubtedly hold a large place in it. And more refined emotions, which we should not describe in terms of fear or rage, may still present obvious relationships to those cruder and more primitive forms. Our sense of "all-over-ishness" when our friend approaches the edge of a precipice, is clearly only a step or two removed from the apprehension or the

actual representation of a fall ; our repulsion to snakes is closely allied to our instinct of anger at the attack of an insidious foe. In the sense of *shame*, again, the physical factor, if less completely explicable, is not less prominent, and clearly stands in specific relation to the feature of the environment on which Prof. James has done well to insist—namely, other human beings and their attitude towards us. Even in *melancholy* of the helpless and moping sort, one may fully admit the sense of the limp and flexed position as a real factor in the emotion ; and one may account for this bodily factor in the same way as in the more definite cases of fear and rage,—regarding the posture as the natural bodily response, not now to some single or sudden feature of the environment, but to any hard and overmastering conditions against which it seems vain to contend.

But as soon as we advance to cases where the close and assignable relation to the environment ceases, the difficulties of the theory begin. To take one of Prof. James's own instances—"When worried by any slight trouble, one may find that the focus of one's bodily consciousness is the contraction, often quite inconsiderable, of the eyes and brows". Now Prof. James treats such an item merely as "giving accent" to a large "complex of sensibility," diffused through "our whole cubic capacity". This is, of course, a convenient description for his purpose ; but it is surely not too much to say that any feature of the bodily state which one can thus localise and bring into prominence must be the preponderating factor of the state, must characterise it so far as it has any individual character—at any rate in cases where the deviation from the normal state in the way of *diffused* comfort or discomfort is too slight for one to be certain even of its existence. In such a case, if our whole bodily sounding-board is reverberating in any way different from that in which it was reverberating before the worry arose, its modulations have been too much muffled to be properly audible—while in the sense of contraction of the brow we do at least catch the sound of a distinct new note. But if this be so, then this sense of contraction must be that wherein this psychic condition differs emotionally from the previous one—*i.e.*, must be, according to Prof. James, the emotion of the worry ; which at that rate ought to be producible by a good rub with an astringent lotion.

But perhaps the clearer limit, beyond which (as it seems to me) Prof. James's theory cannot be pressed, is at the point where *all* local and definable "expression" or "manifestation" vanishes, and where, if a wave of bodily disturbance passes, it is *as such* below the level of definite consciousness. Prof. James of course admits the existence of this point ; and below it he has to make up his several emotions from hypothetical permutations and combinations of extremely obscure bodily symptoms, such as slight variations in the circulating and secreting organs, and slight alterations of muscular tension. Now for emotions which are on

the same side of the neutral region that divides the pleasant from the unpleasant, and which are not connected with definable peculiarities of the general bodily state, (this remaining at the same level of slight exhilaration or slight depression for a considerable variety of them), it is surely hard to attribute distinct qualitative differences to varieties of combination of factors that remain in the dimmest background of consciousness. In trying to imagine such a result, I seem to be trying to coin gold by shuffling counters in the dark, or to produce red, blue, and green from different combinations of white, light buff, and light grey. I am quite prepared to admit that emotions do truly differ in quality much less than is often supposed, and very much less than their conditions. For aught I know, the "sudden glory" of a good joke may be, emotionally, very like indeed to the sudden glory of appointment to some lucrative office; and I think that this view, of the essential similarity of emotions which would be popularly accounted very different, derives valuable support from Prof. James's demonstrations of the large sensory element in emotion. The view seems specially applicable to cases where there is a marked tendency to bodily expression—such as slapping of the thigh or sudden extension of the limbs or trunk—and where therefore the sense of this expression, similarly evoked by various conditions, really is (as I should willingly concede) an important factor of the whole psychological state. But in quieter cases where the emotions have no distinct common factor of this sort, their identity is far more disputable. I cannot get rid of my conviction that, *e.g.*, the emotion of quiet amusement is qualitatively different from the emotion produced by bright and cheerful music. The former of these emotions, by the way, is one which Prof. James has not noticed. He seems to identify amusement with a tendency to laugh; and he asks what the sense of amusement amounts to when the impulse to laugh is abstracted—representing this abstraction as a purely speculative process, which in no way implies that the laugh, or the impulse to laugh, can be practically absent. I think I catch his meaning; but my experience is that the impulse to laugh *is* practically absent, even in presence of the most amusing things. I have never been more profoundly amused than by Jefferson in the second act of "Rip Van Winkle"; but except at one or two points it never occurred to me to laugh. Nor do I think that I was exceptional: I never saw anything like a display of mirth at that act; yet of a large portion of the audience it would surely be true that a "screaming farce" would have *amused* them less. There are passages in "Happy Thoughts" of which the physical effect on most readers is to make them hot all over; but will any one deny that these passages are *amusing*, and to that extent delightful? But to return to my point—the emotion produced in me by Rip's interview with the goblins is, as far as I can discover, qualitatively different from that produced by the overture

to "Zampa"; while the *bodily* reactions—the effects on the skin, muscles, and viscera—so far as they enter into the field of consciousness, must, I am persuaded, be very nearly the same. The chief features in them are probably a faint glow and, as Prof. James has so rightly emphasised, a faint tension of the extensor muscles. And in either case to represent the distinct and keenly-felt emotion (even if I could believe the emotions to be one and not two) as *consisting* in these dimly suffusive feelings, seems to me decidedly less reasonable than for instance to identify the emotion with the sense of some distinct and localised movement, such as tapping time with one's foot.

But the argument for limiting the application of Prof. James's theory becomes surely far stronger still in the case of more durable and pervading emotions; because these will survive unchanged through many distinct variations of bodily state, some of which may be quite incompatible with the special sort of physical response associated with the emotion as its natural or conventional "expression". Prof. James represents *rage* as incompatible with "limp muscles, calm breathing, and a placid face". But surely the emotion of *hatred* may be felt by a man who is resting quietly in an armchair after a hard day's work. Iago did not go about habitually with a flushed face, dilated nostrils, and clenched teeth. But a better example, perhaps, is *grief*. Grant that the emotion of suddenly hearing of a bereavement is in large measure impregnated with bodily elements, such as quickening of the heart and catching of the breath. I am not sure that these are not often the most prominent symptoms of the sudden hearing of good news as well as bad; but let that pass. Would Prof. James deny the name of emotion to the sense of desolation and loss which clouds many a successive day, perhaps for years afterwards, and which is perfectly compatible with the ordinary vital functioning, and even with active bodily exercise?¹ Here the dim reverberations from the whole bodily sounding-board, even if one could suppose them to be permanently going on, must surely be swamped in the general stir of the more normal existence. "What would grief be," asks Prof. James, "without its sobs, its suffocation of the heart, its pang in the breast-bone?" It would be what for the most part it is, an emotion of desire and regret. It must surely be a paradox to

¹ Cases may surely be imagined where certain features of the physical state are sufficiently marked to put it beyond doubt that the whole condition—*quid* physical—derives its character from them; e.g., where a healthy man is taking a brisk walk on a bracing day. The preponderating sense of bodily vigour may be the same to-day, when he is walking to a death-bed, as yesterday, when he was walking to an agreeable party; but will the two walks impress him as emotionally identical? A still clearer example would perhaps be where the physical condition in the two cases is one of *discomfort*—as where the man is obliged to *run* rather faster and more continuously than is convenient. Happiness will triumph over even a stitch in the side.

say that this brooding mass of emotion, whenever it makes its darkening presence felt, induces the bodily conditions associated with the first shock of sorrow; and equally so to maintain that in such a case the image in the mind is a representation of those bodily conditions, and not of the actual loss sustained. The utmost that I could here concede to Prof. James would be that at the times when the emotion is *most distinctive*—times of solitude, for instance—there may now and again be faint initiations of "expression," which help to characterise the whole psychic state; and that when these particular contributions fail—as when the mourner is engaged in ordinary talk or in some other occupation which precludes them—the emotion to some extent loses colour and becomes a vaguer sort of misery. But if—as is surely indisputable—its *mass*, and its character *quâ painful*, remain unaffected under these latter conditions, it is just as truly *emotion* as before, and emotion to which the physical signs—so far from constituting it—do not now even contribute.

But the difficulties naturally culminate when we pass on to "the moral, intellectual, and æsthetic feelings". Against the view that "concordances of sounds, of colours, of lines, logical consistencies, teleological fitnesses, affect us with a pleasure that seems ingrained in the very form of the representation itself," Prof. James maintains that "unless there actually be coupled with the intellectual feeling a bodily reverberation of some kind, —unless we actually laugh at the neatness of the mechanical device, thrill at the justice of the act, or tingle at the perfection of the musical form—our mental condition is more allied to a judgment of *right* than to anything else". He proceeds to draw a clear distinction between cognition and emotion, and illustrates it in a striking way by the coldly critical view of a connoisseur, and the naïve thrills of a layman, in presence of a work of art. Even here I should be glad to know if he really thinks that Titian or Mr. Ruskin have derived less *emotion* from the "Assumption" than the honest English couple whose attitude he so amusingly describes. But one may surely recognise the difference between the judgment of rightness and the emotion of æsthetic pleasure (whether true or false, healthy or morbid), without having to concede that the latter is a mere wave of diffused sensory disturbance. There can be no better illustration of the issue before us than is afforded by one of Prof. James's own examples—that of music. His view goes far to confound the two things which, in my opinion, it is the prime necessity of musical psychology to distinguish—the effect, chiefly sensuous, of mere streams or masses of finely-coloured sound, and the distinctive musical emotion to which the *form* of a sequence of sound, its melodic and harmonic individuality, even realised in complete silence, is the vital and essential object. It is with the former of these two very different things that the physical reactions—the stirring of the hair, the tingling and the shiver—

are far most markedly connected. Such effects no doubt often accompany the genuinely musical hearing of music—the mode of hearing which instinctively takes account of the form; but rarely, I think in *dissociation* from mass and colour of a satisfactory sort. If I may speak of myself, there is plenty of music from which I have received as much emotion in silent representation as when presented by the finest orchestra; but it is with the latter condition that I almost exclusively associate the cutaneous tingling and hair-stirring. But to call my enjoyment of the *form*, of the *note-after-noteness*, of a favourite melody a mere critical "judgment of right," would really be to deny me the power of expressing a fact of simple and intimate experience in English. It is quintessentially emotion—whether due to mere "cerebral forms of pleasure and displeasure," or connected with remote associational sources, I need not here discuss. Now there are hundreds of other bits of music, similar to these in all external ways—in all points that are verbally definable—which I judge to be *right* without receiving an iota of the emotion. For purposes of emotion, they are to me like geometrical demonstrations, or like acts of integrity performed in Peru. I think that Prof. James is bound to accept my experience as I have stated it; but then he will have to answer me this. If the cerebral centre or centres which are primarily affected merely give the sense of *rightness*, and the secondary reverberation from the muscles, skin, and viscera superadds the *emotion*, why does one *rightness* evoke the reverberation, and not the other? I only know that the two bits of musical movement differ qualitatively by the presence to one, and the absence from the other, of an emotional power: why should my brain-centres know better than I, and send down a summons to my body to reverberate when Beethoven is "right," and not when Clementi is "right"? So when Prof. James says that "in every art there is the keen perception of certain relations being *right* or not, and there is the emotional flush and thrill consequent thereupon; and these are two things, not one," I reply that though logically they may be two, experientially they are often one. To the example which I have chosen the doctrine would indeed hardly apply even logically. For the emotion which the musical layman receives is not "consequent" upon the perception of any relations which can be marked out and justified as right apart from emotion; that sort of *rightness* is *caviare* to him. But the veriest layman may maintain that, in writing a movement of a sonata, it is more *right* to produce a musical organism than a musical corpse; and when the two movements are produced, *emotion* is the only test for deciding which of them is alive and which dead.

But I am outrunning my space. I will only suggest, in conclusion, that if the above argument is valid in the case of anything with so large an element of sense in it as music, it must surely apply *a fortiori* to moral and intellectual fitnesses.

V.—CRITICAL NOTICES.

Outlines of Psychology, with special reference to the Theory of Education. By JAMES SULLY, M.A. London: Longmans, Green, 1884. Pp. xxiv., 711.

Mr. Sully's contributions to Psychology have already secured for him so distinct a place as one of the most able and successful students of the science that a reviewer of his latest work is absolved from the pleasant task of merely general eulogy. It needs not to be said in many words that in the *Outlines of Psychology* ample evidence is afforded of the writer's power of acute analysis and felicitous statement, and that the reader will find in it not only a valuable compendium of much new work but also rich material for further reflection. Nor does it seem needful to offer any opinion as to the comparative merit of the book viewed in relation to such similarly planned treatises as may formerly have been accessible to the English student. It goes without saying that Mr. Sully's book, coming as it does at a time when psychology is occupying an unusual amount of attention and the material of the science is constantly on the increase, must take a position distinctly in advance of its predecessors in the same line. It embodies researches of a novel description, and it brings before the student views and lines of inquiry the importance and significance of which have been but recently recognised.

At the same time the circumstances which give to Mr. Sully's volume its fortunate position, as representing in compendious form an immense amount of new work in psychology, have other consequences and impose weighty obligations on the writer of a systematic treatise. It is an old theorem that form and matter go together, and certainly, in respect to any science, it is rarely possible for its material to increase largely in quantity without a change taking place in the fundamental notion, principle or method which animates the whole and gives it a special place in the wide domain of knowledge. The period which has been so rich in detailed psychological work has been one of continued discussion in regard to the exact nature, the conditions, even the possibility of a science of psychology. The many treatises on psychology which represent that work offer to the student a very chaos of conflicting views in respect to all the fundamental problems of principle and method, and a teacher of psychology finds that his hardest, though perhaps not his least profitable, task is to give such an initial statement of the nature of his facts as shall be consistent and capable of development. That there are special grounds of difficulty in taking the first steps in psychology is a well-recognised and much-deplored truth, and one might

add that it is likewise peculiar to psychology that the liminal difficulties cannot be evaded without the most disastrous consequences to the body of the exposition. In the objective sciences, that is, in those portions of knowledge in which the material is, so to speak, one-sided, in which no fact is contemplated save under the form of something capable of being presented as object to a cognitive mind, it is possible to separate the strictly scientific difficulties from so-called metaphysical problems by mere reference to the marked difference of treatment. But it is one of the problems which the psychologist has to handle *in limine*—whether his facts can be viewed as objects merely, and if he be wise he will not allow himself to be misled by any shibboleths of the tribe of science. Terms like 'orderliness,' 'uniformity,' 'law,' have but a formal significance, and must not be supposed to carry with them any decision of the real difficulty as to the nature of the phenomena within which order, uniformity, and law are to be manifested.

Psychologists of a former generation used often to include in their treatment a chapter on the difficulties which originated in the terminology of their science. They rarely exhausted these difficulties, and perhaps there would be no more useful section in a modern scientific treatise on the subject than that which should submit to the most careful treatment the sources of ambiguity in the terms inevitably employed in the investigation. Language, though rich, is far from rich enough to furnish equivalents for all the shades of significance that may call for expression, and, in tracing the development of so enormously complex a fact as the individual mind, the psychologist has constantly to be on his guard against the erroneous identifications of different phenomena that are likely to arise from the employment of identical terms. Words always imply the stage of intelligence in which quite definite recognition of object and objective connexion has been acquired, and cause us therefore serious perplexity when we are called upon to express either a simple phase of thought, or a merely abstracted portion, or the complex fact of recognising an object.

It only remains to be added, that the vast extent of the material which the psychologist has to handle makes systematic treatment unusually hard, and perhaps it would not be unfair to say that, whether or not a science of mind be possible, it does not yet exist as a fact. In face of the phenomena of mind, psychology is at present much in the position in which mechanics was to the complicated forms of material change prior to the disclosure of the simplest laws of moving bodies. We are probably only on the way towards arrangement of our facts into relatively simple and complex, and are yet far from the stage at which systematic development of the whole is practicable. It is in view of the general problems arising from the exceeding complexity of the psychological data, the great difficulty of defining their nature,

and the close relation of the inquiry to other lines of philosophical investigation, that one must examine any new presentation of the science; but before asking how far Mr. Sully's volume advances our insight, a word may be permitted on certain minor ends which the work may serve and probably is intended to serve. It is a text-book, that is, it offers a general introduction to the vast subject, an introduction suited to a first study; and further, it includes special reference to the theory of Education. In both respects, while the book gives much that is valuable, much that cannot be got elsewhere and that is nevertheless indispensable, it appears to leave something to be desired. For the student who is beginning psychological work it is at once too long and too short—too long, because it has endeavoured to include almost every special line of investigation, too short, because it has been found necessary to refrain from the complete, exhaustive treatment of even cardinal difficulties. In my opinion, it is far more important that the student should be brought by careful and many-sided treatment of the more prominent phases of mental life to realise the general nature of the subject, than that he should be introduced to the special researches that have grown up in connexion with each point in the complex history of mind. Such special researches have their value only when carried out on a well-secured basis, and they are even apt to mislead when taken up too soon. The considerations involved in them can only be appreciated by a fuller handling than is appropriate to a text-book, and brief reference is likely to convey a false impression of their exact nature. I do not say that what Mr. Sully gives us, in regard, *e.g.*, to the mechanism of sensation and to movement, is not in itself of high value, but merely that it does not seem material of a kind to be profitable to the student. On another feature of the book in which it bears on the wants of the student, the unity of conception or method implied in it, I shall presently comment; and I would add the expression of a wish, which will probably be shared by other readers, that Mr. Sully had found it possible to extend largely his bibliographical references.

I am in entire agreement with Mr. Sully in his remarks on the connexion between Psychology and theory of Education; and certainly, were one to draft a course of instruction for the training of teachers, Psychology should occupy an important place therein. I would add that, in my judgment, the study of the problems peculiar to the theory of education is of the highest value for the psychologist. These problems compel him to dwell on the gradual development of the mental life, and bring before him in a very suggestive way the variations in the nature of each phase of that life due to its development. But if a writer proposes to go beyond the general bearing of psychology on educational work, which is involved in the very conception of a regular order of mental development, he must, I think, take in more than Mr. Sully has found compatible with the limits of his treatise. He

must be prepared to compare in detail the general rules of educational practice and the materials of education with his psychological doctrines. Only so can he attain the desired end of correcting and illuminating educational method. The short sections appended to the several chapters, in which Mr. Sully makes specific the reference to education, are too brief to represent all that is implied in his psychological analysis, and suffer moreover from being so broken up. Mr. Sully, however, may be encouraged to do what he is eminently fitted for, to deal systematically with educational theory, and we should gladly hail such a treatment.

Turning now to the work as representing a complete statement, in elementary fashion, of the facts of mental life, one is naturally attracted by the general arrangement of its parts, a feature by no means so external as it might seem. A brief introductory chapter on the Scope and Method of Psychology, a chapter supplemented to some extent by three Appendices, is followed by three chapters, on Mental Operations and their Conditions, on Mental Development, and on Attention, which form in conjunction the real introduction, the general treatment of mind as a whole. Then, following to some extent the traditional rubrics, come six chapters (v.-x. inclusive), on Intellect, passing in review, successively, Sensation, Perception, Reproductive Imagination (Memory), Constructive Imagination, Conception, Judgment and Reasoning. Two chapters are devoted to the Feelings, simple and complex, and two to Mind as active or striving, Will and Voluntary Movement, Complex Action and Conduct. It does not seem unfair to say that the arrangement adopted is largely a compromise between the view which, starting with the unity of mind and the intimate connexion of its fundamental features, endeavours to follow genetically its development into specially marked phases, and the view of the older empirical psychology, which fastened upon the specific differences of the developed phases and endeavoured to lay down for each certain generalisations or laws. To recognise the first view at all is something gained; to give a thorough statement of its implications, to carry it out systematically and to bring it to bear upon the empirical generalisations of the older psychology, is a task which we think Mr. Sully is continually approaching in his treatment, but which he has not successfully carried out. The most valuable sections of his work are those in which he approaches the task most closely, the chapters, *e.g.*, on Mental Development and on Attention, and portions of the chapters on the Emotions and on Will; the least satisfying are those in which he keeps more closely to the older forms of expression, the chapters on Perception and Imagination, and particularly those on Thought (Conception, Judgment and Reasoning). The difference between the views, a difference very imperfectly indicated by a brief statement, is so radical that such a constant struggle between them as I

seem to perceive in Mr. Sully's exposition, is almost certain to weaken the effect of the whole presentation, and to make it to some extent a failure. Highly as I rate the value of Mr. Sully's volume, and much as I admire not only the completeness of knowledge which enables him to muster so many isolated facts but also the acuteness with which he treats a multiplicity of single problems, it does not seem to me that he succeeds in giving one complete, consistent view of the whole phenomena of mind.

The apparent conflict of views to which I have referred undoubtedly connects itself with and depends on the omission from Mr. Sully's volume of any full discussion of the point of view from which the facts of mind are to be treated, *i.e.*, of psychological method. One can understand the reasons which might weigh with a writer to induce him to omit the discussion, especially in the case of a text-book; for certainly the problem that has to be attacked is of unusual subtlety and complexity. But unfortunately the peculiar nature of psychology renders it quite impossible to dispense with the laborious work of definition and explanation, and an exposition where one can only gather imperfectly and from isolated parts the general idea of the whole on which the writer proceeds, must find itself embarrassed at various points and have always a certain misleading tendency. Mr. Sully fully recognises that psychology has something peculiar, and invariably couples his description of it as a natural science with some qualifying remark; wherever he has to deal with the advance in complexity of the mental life, his handling implies a more profound conception of the nature of the facts than is formally enunciated; but he leaves the explicit statement unsaid, and the evil consequences seem to me to be apparent in more than one special disquisition in his volume.

For one would not demand a special treatment of the scope and method of psychology were the only result to be the more accurate classification of psychology in relation to natural science and philosophy, though even with that much would be gained. The pressing need is for a clear and unambiguous explanation of what the thinker takes to be the characteristic, peculiar features of the facts he proposes to systematise, an explanation which is but the explicit statement of the kind of consideration that he will apply to the several concrete phenomena as they successively present themselves in the course of his exposition. The difficulties in the way of defining one's point of view are so great; it is so easy to adopt a mode of speech that is radically unsound; it is so imperative that the one method should be consistently carried out,—that the formal discussion of method seems to be imposed as an indispensable obligation on every expounder of psychological science. When one compares the various treatises that represent the cultivation of psychology since the Kantian era, one is struck by the enormous differences in detail that spring from fundamental differences of methodical view, and

impressed with the conviction that an immense amount of labour must yet be expended in merely clearing the way for a sound view.

Mr. Sully emphasises the position that Psychology is a science, and that the psychologist must proceed after the recognised scientific method to classify his facts, to refer them to their conditions, and to reduce the complex mass to general laws or order. With all this one can have no quarrel, for nothing is implied as to the nature of the facts, and no one would question that if the facts are to be known, are to be reduced into the systematic form of a known body of truths, the processes to be applied are those of knowledge. The difficulties arise with the next step, when a statement, however brief, is offered as to the nature of the facts. Here Mr. Sully leaves us in some obscurity. He uses the characteristic of *inner* experience as marking off the facts of mind from those of nature, and he lays stress upon Introspection as the mode by which inner experience is brought before the thinking mind. Now it does not seem to me that the distinction of inner and outer experience will carry us very far, and it is certain that the distinction is far from being so clear as might at first glance appear. Outer experience, Mr. Sully is well aware, is just as much a problem for the psychologist as that which is contrasted with it. And if we turn the opposition into the more objective phrase, outer and inner facts, we are left without any data by which to determine the precise nature of the latter. The contrast between inner and outer facts as the psychologist treats it is a highly complicated and involved act of mind, and we can hardly afford to start with it as our most elementary distinction. Nor will the negative mark, non-occupancy of space, avail much. It may be possible in the course of psychological analysis to explain how it comes about that the individual distinguishes his own mental life from the larger world and characterises it as opposed radically to the extended, space-occupying things known to him; but if we are to start with this feature, we must express it in such terms as shall show its true place in the history of the individual's mind. The term Introspection, finally, has this of danger in it, that it inevitably leads one to regard the facts of mind as presenting exactly the same formal aspect, aspect as known fact, to the introspective observer that external facts offer to him when percipient. They are taken to be isolated, separable objects, *inner* in nature, but connected in ways identical with the observable connexions of natural facts. One might even question whether the term Introspection should be allowed to hold the place it does in psychological treatises. It will hardly be maintained that it is by a special act the individual comes to know that he has a mental life, a life which he distinguishes from so-called external things; and if it be said, that nevertheless it is by introspection he obtains a scientific knowledge of this life, one must point out

that the term indicates then no new unique process, but simply concentration of attention on that which is given in memory. It certainly becomes possible for the individual to reflect definitely on his own mental existence as contrasted with the stream of events taken to be objective, and we can trace the steps by which the power is gained; but there needs no new term to indicate the fact.

The few indications given by Mr. Sully of the main conception on which he proceeds do not allow him, I think, to attain any very clear discrimination of the province of psychology from other branches of philosophy. In fact, were one to press to their conclusion the expressions regarding inner experience and psychology as a science, they would warrant one in saying that psychology had no relation at all to philosophy, and that it stood on its own basis as a treatment, in scientific fashion, of a body of specially characterised facts. Such a conclusion would be unfortunate, though one should deprecate the inclusion in psychology of certain problems not uncommonly dragged in, and should maintain that a distinction can be indicated sufficient at once to give a clear ground for psychological analysis and to connect it with general philosophy.

It appears to me that if we proceed towards a determination of the exact nature of psychological material and start, as we must do, with broad currently accepted distinctions, we arrive inevitably at the conception of the individual conscious subject as that which gives unity to all the phenomena of the so-called inner life. We cannot express a fact of mind otherwise than through terms which imply the peculiar reference to the individual subject and the distinction between the state of the individual and that which is, as we should put it, the content of the fact. Our analysis of the conditions under which the sense of individual mental existence comes about may force upon us the conclusion, that in the complex mechanism through which it is realised there are the possibilities of affections which we could hardly describe in similarly precise terms, but we interpret these only through the analogy of the mental existence in which the individual is aware of himself and has opposed to him a relatively objective system. By objective, I may note, there is not implied *extra-organic*; the dualism which starts with mind and things seems to me not only wholly misleading but wholly needless for psychological analysis. A thing, in the sense of an extra-organic object, is an extremely complex determination of the individual's thought, and we can trace genetically how the characteristic features come to be added on to the perfectly general opposition of individual consciously existing and that which is *object* for him.

When we work backwards and endeavour to indicate the full nature of this ultimate fact, we are brought, I think, to see that the current separation of Knowing, Feeling and Acting does injustice to the unity of mind. Briefly, one would say there can be

no sense of individuality, no consciousness of self as a mental existence, save through the intimate union of knowing, feeling and acting. Knowing, when we view it *in abstracto*, implies solely, as its formal and general characteristic, the dual opposition between knower and known, an opposition not of two entities or facts, but an opposition which is contained in and makes the essence of the act of knowing. But so far there is given nothing beyond mere generality, and we might analyse knowledge to any extent without discovering in it aught that would serve as adequate foundation for the conception of the individual self. Only in activity is there individualising force, and only through feeling which accompanies every change of mental being is there effected a junction between the striving or impulse that is the secret of individual life and knowing which makes that life conscious and intelligent. The threefold cord of conscious life we may subject to isolated treatment, and in the course of its development the relative proportions of its factors exhibit the most wonderful varieties, but its unity is the indispensable fact with which in tracing the history of the human mind we have to start. Such a conception allows us not only to render quite precise the relation of psychological analysis to other branches of philosophy, but serves to determine the course of psychological exposition and to illuminate its separate problems. It is through and in the conscious life of the individual that all the thinking and acting which may form the material for other treatment is realised, and with the content of that thought or action the psychologist, as such, has not to deal. Where we isolate the content and treat it as having a quasi existence *per se*, we are in the attitude of objective or natural science. Where we endeavour to interpret the significance of the whole, to determine the meaning of the connective links which bind it together, we are in the attitude of philosophy. But when we regard the modes through which knowing and acting are realised in the life of the individual subject we are in the position of the psychological inquirer. It is the sole and the whole business of the psychologist to trace the history of the conscious life of the individual subject, and it is in the notion of the individual subject that he will find the limits of his treatment. In parts of his work, as before said, Mr. Sully does approach this view, but he does not always remain true to its guidance.

Were we to adopt as our principle in psychological exposition this notion of the individual conscious subject, we should find that the course of exposition was determined for us. The conditions under which the mental life of the individual is possible would form the matter for the first general division of the treatment, and we should be able to carry with us from this general treatment propositions that would find their special application in the analysis of more complex phases. The three chapters of Mr. Sully's book, already signalised (chs. ii.-iv.), seem to me to

correspond in part to this general treatment, but he has not succeeded in conveying so clearly as could be desired a representation of the elementary constituents of mind, and he does not consistently apply even what is given. I shall take one or two special matters to illustrate what I imagine would follow were the more complete conception carried out.

Mr. Sully rightly gives to Attention a place as a general fact, and under that head treats fully and instructively of the conditions under which the "self-direction of the mind" is brought about. But he seems to be uncertain as to what attention is in itself and gives only metaphors in explanation. Now closer inspection of the numerous facts he adduces might have led him to the just conclusion that attention is not in one sense an additional fact, something over and above the content of mental life to which, as one popularly expresses it, attention is given, and also that the precise significance of attention, the component parts, will vary according to the stage of mental development. If we bear in mind that the individual self-consciousness contains always the three factors, knowing, feeling and striving, that it is constantly altering, that at each stage there becomes more definite the notion of self, and that at each moment the empirical self may present special features, there is no difficulty in regarding attention as the term to indicate the definite, momentary connexion of any given content of the mental life with the sense of individual being. The difference between attention and consciousness would then simply be, that in the former the given fact has such concomitants as connect it for the moment in a special way with the prevailing contents ('the ruling cluster of ideas,' as Volkmann puts it in the passage quoted by Mr. Sully) of the individual's self-consciousness. It is by a slow process that there grows up so definite and habitual a 'cluster of ideas' (constituting self in opposition to other things) that voluntary concentration becomes possible. Indeed the distinction between the so-called involuntary and voluntary modes of attention is to be regarded as one of degree only.

There is one general consequence of the view taken which is so important in its bearing on isolated problems that it may here be briefly stated. Nothing that we can call a state of mind is ever simple. We may therefore dismiss as frivolous the inquiry whether the mind can be in more than one state at a time, and look with distrust upon all the modes of speech which imply that the mental life consists of a series or train of states. We shall even qualify the old rule of attention which Mr. Sully quotes with approval, *Pluribus intentus, minor est ad singula sensus*, and say that it is utterly false when taken without due explanation, and extremely valueless with it. And when we proceed to the analysis of highly-developed phases of mental life we must be on our guard not to neglect such useful hints as the general view supplies to us. In examining, *e.g.*, the

important portion of knowledge that is commonly called sense-perception, and taking for isolated treatment the conditions under which affection of the bodily mechanism results in sense-perceptions, we must not allow the phraseology we employ to induce us to accept sensations, or sensuous atoms, or shocks, or whatever they may be called, as facts of the mental life. Mr. Sully's treatment of sensations, full and painstaking as it is in reference to the special researches that have yielded so much knowledge of the mechanism of sense, lacks the clear determination of these as mere elements, factors of the unique state of knowing, and is, moreover, perplexed by the want of a general statement correlating the several parts. His view of perception is difficult to grasp, and it would have added to the value of his exposition had he quite marked off the problem of localisation from the discussion of the other characteristics which he assigns to perception. It might be well did psychologists agree to employ the term *Intuitions* to indicate that aspect of the percept in which it is regarded merely as sensuous content *plus* the additional feature of space-determination. But both in regard to localisation and in regard to the additional characteristics of the percept, Mr. Sully's account would have been improved by following more deliberately the genetic method, and including a fuller treatment of that which seems to me the key to the whole process, our determination of the body. The predicates by which we assign specific meaning to the so-called external thing are entirely relative to the body, and what we call the *reality* of a perceived thing has no significance save when viewed in relation to the reality of the body. Our apprehension of an external thing is an excessively complex fact, but we can trace with considerable success the mode in which out of the primitive opposition of self and object there gradually grows up on the one hand the more definite conception of the empirical self, and correlatively, on the other hand, the determination by ever new features of that which is not self.

The propositions that there is no reality save as the counter term of the real activity of self, and that the reality of the external thing perceived is a more complex determination relative to the recognised reality of the body, throw light on many perplexing points of special psychology. Thus, *e.g.*, Mr. Sully seems to me uncertain with respect to the nature of Belief, and to be inclined to regard it as a unique fact, influenced by and influencing Knowledge, Feeling and Will, but distinct from them. At the same time, he thinks that knowledge is on its subjective side believing, that is to say, would substitute belief for knowledge as the main fact of mind. No doubt the conditions of belief are numerous, and, as with all other facts of mind, differences will appear according to the complexity of the stage of mental life at which belief is being viewed. But the connexion between belief and the notion of reality points the way towards an explanation of its nature and its relations to the other facts of mind. Reality has

more meanings than one, and what is called external reality is but one species. All of them signify, however, the opposition of self in its momentary phase, of self recognised as real, and of the correlative term, whatsoever that may be—a term the nature of which is the content of the individual's knowledge at the moment. Now, the recognition of the reality of self is not a simple fact, either of knowing, or of feeling or of acting, but a compound of all three. Belief is only the special name for the sense of reality which accompanies each recognition of self as in opposition to some determined object. So long as the difference between the mental life and its surroundings is obscure or imperfect, so long does 'primitive credulity' lead the individual to take as real whatsoever enters into his conscious experience. So soon as memory enables him to distinguish between the momentary phase of his experience and its continuous existence, so soon is there possible a distinction between that which is believed in as real and that which is determined as ideal. The numerous features by which external reality becomes for us a fact of experience, give additional complexity to belief and allow us to draw the familiar distinctions between perception and imagination which we are accustomed to take as exhausting the opposition of real and ideal. I do not say that perceiving and imagining have the same content so far as knowledge is concerned, and that the one is accompanied by belief which is wanting to the other, for every characteristic of the total state affects the content, but only that in the one the elements for determining reality are given and that in the other they are absent. The elements themselves vary much in the course of development, but, so far as external reality is concerned, always relate definitely to the body. It is because the feelings and the will enter so potently into the determination of the body as a known fact, that belief may be so readily described as a kind of feeling or even as an active state.

To Mr. Sully's treatment of Imagination the main objection I should have is his tendency to look upon the ideas as separate images, entities of some peculiar kind, and to disregard the important consideration that they are always ideas *of* something, that is to say that here we have repeated the complex fact of a mental state in which is given the opposition between the subject and the content represented. Language is hard, and it is difficult to avoid saying that the mind has ideas, as though ideas were things which the mind contemplated, and yet the expression is most misleading. The mind, one would rather say, is its ideas. It is only through memory and reflection that we come to distinguish our mental life as a unity and to contrast with it the separate phases as something belonging to it. But on this and on many other topics suggested by the chapters on Imagination, I cannot now remark.

It is with some satisfaction that one sees the small space

allotted by Mr. Sully to the account of the Laws of Association. As commonly formulated these laws are most delusive, and the attempt to apply them in their crude form has only resulted in failure. We have in them empirical generalisations founded on observation of highly complex phenomena of mind which, as so stated, are wholly inapplicable to the problems that psychology has attempted to solve by their means. Recent writers, especially Wundt, but in part also Steinthal, have approached the subject in a more comprehensive way and distinguished between the elementary modes of connexion in the mental life and the conditions under which in matured experience suggestions come about. What we require specially to keep in view in approaching the problem is that the mental life does not form for us a string of separate parts (a consideration, by the way, which should lead to a considerable revision of the ordinary explanations of Memory), and that phrases such as 'calling up an idea' are mere metaphors. Each separate fact of conscious experience stands out momentarily from the vast complex of the individual mind and, as one says, receives so much attention, but it is always accompanied by this complex, and the question what determines the train of thought, what causes us, as we say, to think of something else, is really the question what causes attention to include this or that at the moment. The motives are infinitely numerous, and vary indefinitely in character in successive stages of individual development; for the most part, indeed, they are distinctly what would be described as logical; but the essential fact is the movement of attention as expressed in the view taken of the part more immediately under consideration. It would require more detail than can here be given to show how the currently accepted Laws are taken in under this more comprehensive view.

The last point to which I can call attention is the treatment of the various forms of Thought, contained in chs. ix. and x. Here in particular I seem to notice the effects of the view which regards the complex and unique fact of knowing as though it were but an object, one among others, with the same singleness of nature that is peculiar to the content of external perception. Mr. Sully takes the class-notion or concept as though it were a fact to be observed, differing from the idea of the particular in being relatively poorer in marks, and resembling for the most part the generic image. Not only would one doubt the whole supposed process of beginning with particulars and passing to the general, not only would one hesitate much in describing the class-notion as the special type of conception, but one must entirely reject the reading of the general notion which is satisfied with regarding it as a kind of fainter image or faded picture. Fainter image or faded picture may, in truth, exist as parts of the complete act of conceiving,—parts which ought not, however, to be viewed as having a quasi-objective existence,—but the act of conceiving is itself, as the very name and common logical terminology

force upon us, a complex operation, in which distinct and emphatic recognition is present of objects as opposed to the thinking subject, and in which the attention is turned upon the relations of content which these objects exhibit. A general notion is the knowledge of something, and cannot even be described in such a way as to avoid the ultimate dual reference. It is no matter of surprise, but a simple consequence of the way in which our conscious life develops, that the amount of concrete imagery implied in the act of conceiving should be infinitely varied, and that signs or symbols, which are possible only for a thinking intelligence, should be capable of taking the place of specific representations. On the whole, however, the chapters on thought and its processes are those in which Mr. Sully's keen faculty seems to have been least exercised, and perhaps the problems included therein have less interest for him than for others.

It would unduly extend this notice were all the subjects suggested by the latter portion of the book to be noted, however briefly. The psychology of the Feelings and of the Will is in a very inchoate state, and I can only say that I think Mr. Sully's contribution here of very high value. I do not make very clear to myself his account of the Will, and I should gladly have seen a more thorough discussion of the various phases through which our impulsive or striving nature passes in its development. I wish, too, that Mr. Sully had not said even the word that is here said on that famous bugbear, Free-will.

I cannot conclude without the general remark that though difference of principles makes me dissatisfied with Mr. Sully's exposition as a whole, I am not insensible to the high merits of his work. Many portions, particularly where the analysis of some rather concrete phenomenon is under inspection, seem to me of the highest order.

ROBERT ADAMSON.

Leibniz. By JOHN THEODORE MERZ. ("Philosophical Classics for English Readers.") Edinburgh and London: Blackwood, 1884. Pp. viii., 216.

This volume is to be welcomed not only because it has distinctive merits which might give it a claim to a place of its own even amongst the voluminous foreign literature on Leibniz, but specially as the first attempt made in England to offer a comprehensive estimate of the life-work of the founder of German philosophy. It is not difficult to trace the causes which have led to the neglect of Leibniz in this country. His philosophy was too far apart in character from the prevailing modes of English thought to render its assimilation by the latter anything but difficult, even had there been no Newton-controversy to excite a prejudice against its author. In Germany his philosophy was certainly not neglected, yet the history of its influence bears

traces of the irony of fate. Unsystematised by its founder and modified by him from time to time as new facts and new points of view became apparent to him, it was reduced to rigid and abstract form by an unsympathetic follower, and it was this systematisation of it that influenced Kant and thus determined the manner in which Leibniz was to affect the development of speculation. Built on the ruins of Scholasticism, it gave rise to an equally dogmatic system in which the appeal to reason was worked as uncritically as it had formerly been the custom to use the doctrines of the Church. Leibniz himself was an early convert to the new way of interpreting nature; but, in the hands of his follower, his system seemed to offer the means of constructing science *à priori*. It is a remarkable fact that, while the subsequent progress of mathematics was due to the new method and symbolism of Leibniz, his original ideas in logic and psychology bore no fruit whatever, and scarcely attracted attention till they had been arrived at afresh by independent investigators. Wolff's device of reducing the principle of Sufficient Reason to that of Contradiction no doubt seemed to him to supply the link that was wanting in Leibniz's system to render its logical concatenation complete; but its only effect was to give knowledge the false appearance of *à priori* deduction, and thus to lay stress on the weakest part of Leibniz's philosophy.

It is hardly necessary to say that Mr. Merz's volume is the result of a sympathetic study of Leibniz in his own works, and not in the form in which, as systematised by Wolff, his thought became a factor in the historical development of German philosophy. The author will not even attempt to weave Leibniz's doctrines into a consistent system. This has been done by historians of philosophy, but, he says, "without sufficiently considering whether—if such a task had been undertaken by Leibniz himself—he would not have found himself compelled to modify or amplify many of the views to which he clung tenaciously in his correspondence and casual writings" (p. 135). This remark is perhaps not uncalled for. More than any other systematic philosopher, Leibniz kept his mind open to receive new views, and was always ready to assimilate the element of truth which he found in an opposed theory. But yet the central position of his own philosophy had been reached by him many years before his chief writings were produced. However unsystematic a writer, he was too systematic a thinker, and his philosophy was too intimately associated with life, for him to continue throwing out half-truths which had not been brought into connexion with his fundamental principles.

There does not seem therefore to be any sufficient reason for denying that the various fragmentary expositions of Leibniz's thought were the result of a consistent *Weltanschauung* and that they are capable of systematic expression. But there is no doubt that Mr. Merz has done wisely in preferring in the present

work to elucidate the principles of Leibniz's thought rather than to attempt the systematisation which Leibniz himself did not give. Even if the "English Reader," for whom the volume is expressly intended, has less familiarity with Guhrauer's biography and with "the well-known historical treatises of Ueberweg, Kuno Fischer, Erdmann, and Zeller" than the author seems to credit him with, he has much to learn—and will be able to learn much—from this volume as to the harmony of Leibniz's life and writings, and the principles of which all his work was an application.

"Early in life," says the author "Leibniz was actuated by two distinct desires in his study of things—by the desire to know and think clearly, but not less by the wish to do everything for a purpose and a use. As he rose to the higher aspect and deeper meaning of things, these tendencies became more clearly defined. Clearness and precision of thought meant for him more and more the mathematical and mechanical treatment of scientific problems, while, at the same time, his regard for the practically useful attained a higher significance. It meant that everything in the world had a deeper sense, a meaning, a purpose; that the universe had been created for an end, and that this end was being achieved through the mechanical laws which are the external formulæ of the internal essence of things" (p. 69).

This passage may be taken as giving the key to Mr. Merz's whole exposition. The Law of Continuity, and his logical principles of Contradiction and Sufficient Reason, notified Leibniz's adherence to the mechanical view of things (p. 138). But along with this conviction of the necessary connexion of all things by mechanical laws, he held to the permanent individuality of the monad. And it is the connexion of these two points of view that forms one of the greatest difficulties of his philosophy; and as such receives prominent treatment here. Other difficulties—such as that of the relation of God to the monads, or the difficulties caused by Leibniz's expressions regarding the reality of corporeal substance and the relation between body and soul—are omitted from the author's plan, perhaps as dealing more with the systematisation of Leibniz's thought than with the principles which guided it. But Leibniz himself never lost sight either of his mechanical or of his teleological point of view; and it was largely owing to their competing claims that he was forced to formulate definitely his doctrine of pre-established harmony. Yet this doctrine can only serve to explain the consistency of his view of universal inter-connexion with the exclusiveness of the monad, when these two poles of his thought have been already reached independently. Leibniz himself does not seem to have passed from one of them to the other by any logical process. And the author is certainly not far wrong in tracing to a subjective cause the connexion of the two principles in his mind: "Leibniz's love of regularity led him to the mechanical view of nature; his practical sense, his desire to see a purpose in everything, made

him decide for the individualistic solution of the great problem" (p. 179). At the same time it should be remembered that Leibniz suggested that these points of view might be brought together in a way which was, however, never worked out by him. He saw, moreover, as Mr. Merz points out (p. 98), that the solution of the problem could never be reached by explaining one set of circumstances or phenomena mechanically and another set by final causes. And, the author says:—

"The development of opinions during two hundred years has proved that Leibniz was right. The system of interpolation and compromise, such as that attempted by Clarke, has become impossible. The world of mechanical laws, further extended, has left no room for the world of final causes, living in the governing mind of a Deity; and the only way out of the embarrassment is to resort to some process of remodelling the notions."

This is what Leibniz tried to do, not in the way adopted by his great contemporary Spinoza in reducing the notion of teleology to a subjectively-biassed explanation of the facts of mechanical sequence, but by the theory that, when we trace physical laws to their source, we find that their nature and position can only be explained by reference to an ideal or rational causality working for a purpose or end. Leibniz thus expressly rejected the method of compromise, and held at once to the thorough-going mechanical connexion of natural events and to the view that nature and its laws are expressive of purpose. But he left the theory without fully establishing what it required to have established—that the notion of mechanical sequence is in itself incomplete and one-sided and contains an implicit reference to the notion of final cause.

This want of conclusive logical connexion seems to be regarded by the author as due, not so much to the incompleteness of Leibniz's speculative analysis, as to the necessity of making certain cardinal assumptions before it is possible to think philosophically or at any rate to come by a system. "Leibniz," he says, "was a philosopher, and as such he had certain primary principles which biassed him in favour of certain conclusions" (p. 141); and Locke is referred to as representing an "opposite and equally legitimate" school of thought to Leibniz's (p. 153). Yet it may well be that these and other opposed theories are only equally legitimate in so far as capable of reconciliation from a higher point of view. The history of philosophy has been a succession of more and more comprehensive efforts after such reconciliation. Leibniz's own thought was an attempt to combine opposed methods: as the author suggestively puts it, using the words of Lotze, "to calculate and predict phenomena, but also to understand and interpret them" (p. 183).

The one-sidedness of Leibniz's own philosophy consists, according to Mr. Merz, in its "apotheosis of logical method" (p. 188); and he thinks that it was Schelling, more than any other

among modern thinkers, who supplied the idea the want of which was the "inherent defect" of the Leibnizian teaching (p. 210). And Schelling is regarded as the centre of a new movement because he infused the element of poetic feeling into the purely logical development of previous systems. If Mr. Merz would do for Schelling what he has in the present volume done for Leibniz, and perhaps, thereafter, follow up these two different lines of thought by an estimate of the position held by Lotze to both of them and to the philosophy of our own time, it would not only contribute to the completeness of the series of "Philosophical Classics," but would be of peculiar value as representing a school of thought which, as many indications prove, has a future before it in this country.

W. R. SORLEY.

The Objectivity of Truth. By GEORGE J. STOKES, B.A., Senior Moderator and Gold Medallist, Trinity College, Dublin, late Hibbert Travelling Scholar. London: Williams & Norgate, 1884. Pp. 118.

Mr. Stokes's book is not always easy reading. His German studies have beguiled him into sentences that sometimes grow to portentous dimensions. There is one, for example, on p. 4 which runs to 14 lines with nothing but commas to help the struggling reader; and there is another of 21 lines on p. 36 in which the semi-colon and parenthesis extended to him are somewhat of the nature of straws to a drowning man. But it is right to say that these are exceptions, and that Mr. Stokes's occasional disregard of externals is generally due to the intentness of the thinker upon his thought, or to his desire, by multiform presentment, to drive it home to his reader. The book is written throughout both with force and acuteness. The author cannot be accused of misapprehending the views which he criticises; hence his criticisms, even when they might be rebutted, help to light up the real meaning of philosophic doctrines. The thesis which the Essay defends is, at the same time, sufficiently in line with questions at present in dispute to make it a real contribution to the debate. Stated shortly, Mr. Stokes's central position is the necessity of an *object* of thought in order that thought may have a real reference, i.e., be thought or cognition. He argues, therefore, for a philosophic Dualism or Natural Realism as against a system like Hegel's; but as against a Natural Realism like Reid's, or even Sir W. Hamilton's, he has, on the other hand, so much to say that he often relapses into something very like the Hegelianism which he set out by condemning. A short survey of the argument will best show Mr. Stokes's attitude towards the two theories between which he attempts to mediate. It will also serve to make plain the general standpoint from which he looks at the history of modern philosophy.

The aim of the Essay, as stated in the Preface, is "to enunciate a principle that may re-unite the divergent streams of speculation which flowed from Kant and Reid". The first chapter, on "The Empirical and Dogmatic Schools," explains briefly the rise of the problem which Kant and Reid attempted in different ways to solve. Locke, as Mr. Stokes points out very truly, introduced the habit of "dealing with ideas and processes of knowledge as they are *cognised* rather than as themselves cognitive states of mind". In other words, the objective reference of cognition or knowledge or ideas as such tended to be superseded by a merely psychological consideration of them as "states of consciousness" or mental facts. For the Empirical school, therefore, "the knowing or the series of impressions and ideas displaces the objects of which it is the knowing, and becomes itself at once the knowing and the sole thing known, or rather it ceases to be *knowing*". This is Hume's position, which leaves nothing beyond the succession of unREFERRED impressions. In the Rationalistic philosophy, on the other hand, as we find it in Leibniz, "the implicative nature of thought," as Mr. Stokes calls it, may be said to be preserved. The thought-processes of each monad have an ideal reference beyond themselves; each monad is a mirror of the universe. But, each monad being shut up within its own internal nature, there is no necessity in the system for such an objective or cognitive reference. It requires to be superadded by the (properly miraculous) theory of the Pre-established Harmony; that is, it is simply asserted. In the Leibnizian monad, says Hegel, ideas rise like bubbles; and the endless serial development of one out of another recalls, therefore, Hume's "bundle or collection of different perceptions which succeed one another with an inconceivable rapidity and are in a perpetual flux and movement". Thus both Empiricism and Dogmatism fail to explain knowledge; they give us, instead of cognitions, psychological states considered simply as such.

We pass accordingly in chap. ii. ("Idealistic and Realistic Objectivity") to consider the method by which Kant and Reid respectively endeavoured to break through the charmed circles of ideas and reach truth or objective knowledge. Taking judgment as the central function of mind, Kant clearly recognises the presence and necessity in knowledge, as such, of an objective reference; but he calls upon us to renounce the quest of the absolutely real and to content ourselves with a phenomenal objectivity. The special form of the Kantian theory speedily disappeared in Germany. It was impossible that the thing-in-itself could survive in the form which Kant had given it; and so there arose a new Idealism in which the notion of anything beyond or outside of thought is systematically denounced as self-contradictory. Mr. Stokes makes it an objection to this whole mode of philosophising that it "treats thoughts no longer as thoughts but as things". As against it, he emphasises the fact

that "a thought is the thought of something". He considers it "a merit in Hegel that he has conceived thought as involving not merely identity but also difference. But then he conceives thought as itself giving birth to the difference through which thought is, as creating its own determinations. But thought can in its own person create nothing, not even itself. 'Abstract notions,' says Bishop Butler, 'can do nothing.'" As this sentence from Butler is taken as the motto of the Essay, Mr. Stokes would seem to be inclined to make common cause with Reid's Realistic, rather than with Hegel's Idealistic, Objectivity. Comparing Reid with Kant, we find that Reid sought to escape from scepticism "by simply pointing out the general character of knowledge, of perception, that it is cognition out of itself, from its own nature, of an object distinct from itself" (p. 23). "In other words, Reid really did what Kant claimed to have done, he retorted the game which Idealism plays upon itself. Idealism said the external world exists only in the knowing, therefore it is not. Reid sees that if it is not, the knowing of it cannot be" (p. 35). In accordance with these passages we find that, when Mr. Stokes comes to state his own position in the third chapter ("The Objectivity of Truth"), he expressly asserts, against Hegel, thought's transcendence of itself, and apparently endorses Natural Realism:—"It is perfectly true that thought cannot, so to speak, get outside of itself. . . . All such transcendence of itself by thought remains itself thought and a thinking process. . . . Still, the very nature and essence of thought, and every particular thought, is the transcendence of itself, not of itself by itself as thinking, but of itself *by* and *in* that which it thinks. Thought, without ceasing to be thinking, does, through its very nature as thought, in its relation to the object, cognitively go forth out of itself to it, and through the presence of the object which it thus cognitively determines is this the thinking cognition of thought itself determined. Thought is, in every case, the cognition of an object, which really, actually, existentially out of thought, is ideally, intellectually, intelligibly within it; and just because within in the latter sense, is it known as actually without in the former" (p. 53). But he has no sooner said this than he finds it necessary to protest against the separation of the two sides—Being and Thought. The Realistic school err in hypostatizing the object and using it as an explanation of the origin and constitution of the faculty of thought. The Idealists err no less in the way in which they conceive the relation of thought to objectivity. The relation is not to be conceived "as though thought were a something ready made, coming from elsewhere, and giving birth to the objective world as it or its. In such a case it is itself only another object producing that world; but the fact is, it is itself only in the production of that by which it is produced" (p. 58). This is to all intents and purposes, even in the antithetical form given to it, a Hegelian statement. Mr. Stokes condemns Hegel's

as "a bastard objectivity". It merely points, he says, to "thought here and thought there". But when he comes to explain his own meaning, we find him saying of the object of thought:—"In thinking this object, thought does not think simply itself. In so far as it thinks itself, it thinks itself *materialised*, and so far, other than itself" (p. 50). Now "otherness" and "materiature" or "petrification" are the very phrases which Hegel (followed by Dr. Stirling) employs to body forth his own position. I cannot see that in either case the expressions used throw much light on the fact. But one way in which an argument like Mr. Stokes's may be useful is by making the "Hegelians" among us ask themselves how far they are prepared to let nature go free, in Hegel's own phrase, from the notion or from subjective thought. What is the precise meaning which they attach to the externality of thought to itself in nature—to the relative independence which they admit to belong to the object? In some expositors, the idealistic tone predominates, and we seem not far removed from Subjective Idealism; in others the realistic prevails, and nature, as we may say, gets so much line that we seem almost to join hands with Natural Realism. Dr. Stirling, it may be noted, has always inclined to the latter mode of presentation, and perhaps increasingly so in his later works.

From a more general point of view, Mr. Stokes's Essay is valuable as a protest against the neglect of "reality" by the Idealistic systems that take their rise in a theory of knowledge. There ought to be no quarrel with the motto he has chosen, "Abstract notions can do nothing," nor with his addition thereto, "They cannot even of themselves *be*". Nature is not simply the categories doubled. It is only because the universe exists as a concrete reality that thought exists in its relative opposition to being. This concrete reality is what Hegel calls Spirit; Spirit is throughout assumed by Hegel as a fact, and his system is the analysis of its nature. And, of course, Hegel always assumes, too, that concrete Spirit is a great deal more than abstract notions or even than abstract notions reflected back upon themselves. I must confess that I have never been able to see where or how Hegel *deduces* this something more (feeling, for example, with all its implicates); but neither do I find Mr. Stokes completely successful in that respect. From the nature of the case, Being can only be described in terms of thought; our systems are descriptions of existence by the systematising intellect. But it is misleading to assert (or to seem to assert) that the notions we use in the description *are* existence. If some Hegelian thought seems to involve this claim, Mr. Stokes does good service in calling attention to the fallacy. His polemic on this point does not prevent him from laying down in his concluding chapters ("The Objectivity of Truth in Science" and "The Objectivity of Truth in Religion") a position substantially the same as Hegel's,

viz., that the only standpoint from which the universe can be viewed organically is that of an existing intelligence.

ANDREW SETH.

Lectures on the Philosophy of Law, designed mainly as an Introduction to the study of International Law. By WILLIAM GALBRAITH MILLER, M.A., LL.B., Lecturer on Public Law (including Jurisprudence and International Law) in the University of Glasgow. London: Griffin, 1884. Pp. xv., 432.

The law of nations is deemed, by a standing literary and academical tradition, to have some peculiar and intimate connexion with the law of nature, which in modern usage has come to mean the philosophy of law in general. Yet the most successful writers on international law have not been those who most professed to be philosophers. Nor does philosophy much abound among the sort of men who are most active in making precedents for this branch of jurisprudence. But a body of doctrine which may be definitely said to owe its existence to an ethical and philosophical movement, and which is still more or less vague in principle, and, as compared with municipal law, both uncertain and scanty in details, offers irresistible temptations, as it may assert a historical claim, to greater freedom of speculative treatment than lawyers permit themselves in things clearly proper to their art. Mr. Miller was quite in accordance with Continental and Scottish custom in putting forth a scheme of *Naturrecht* "as an introduction to the study of International Law on a scientific basis"; although this involves the discussion of many things that do not appear at first sight to have much bearing on the laws and usages of war, neutrality, territorial sovereignty, and the like, or indeed any bearing at all.

Indirectly, Mr. Miller's work is a protest against the English school of jurisprudence as conceived by him. He says, "At the time I commenced to lecture, it seemed to be a tenet of the orthodox English school of jurisprudence that International Law was not law, and the most satisfactory mode of answering such a contention was to examine the nature of law in general". I am not quite sure what the orthodox English school of jurisprudence is, or where it is to be found. Recent serious writers in England on the philosophy of law may still be counted on one's fingers. I doubt whether more than half of them, if so many, would accept Austin's dogmas about the distinction between Law and Morality, or in particular the dogma that International Law is a kind of Positive Morality. In any case, it is open to doubt whether our Universities and the Inns of Court can be said, as yet, to have established a school of jurisprudence at all, though it is to be hoped we are on the way to it. For my part, I so far agree with Mr. Miller as not to accept the supposed

orthodox tenet. But I find the rejection of it possible without an appeal to Hegelian negations of negations, or schemes of Kantian and quasi-Kantian categories, or other things understood neither of lawyers nor of publicists. And a philosophy of international law which leads its followers to the conclusion that "pure neutrality is impossible now-a-days," and that, instead of aiming at impartial justice, "neutrals must make up their minds on which side right is, and give assistance to that side,"—in other words, must entitle the other side to treat them as enemies—does not appear obviously fitted to promote the peace of Europe, and does appear to be founded on the standing confusion between acts of a State in its sovereign capacity and acts of individual subjects of that State. It is not true that "Great Britain sympathised with, and assisted to some extent, rebels against the Government of the United States". These things were done by many British subjects, and the question was raised whether and how far their Government was bound by the law of nations to prevent them. But England, as a State, aimed at all events at exercising a perfectly impartial neutrality. No doubt, belligerents would always like to increase the burdens of neutrals; and the Continental literature of international law, being mostly French or German,—in other words produced by citizens of powerful military States whose immediate interest is to exaggerate the claims of belligerents—has lately given a show of authority to this tendency. But it would not the less be a retrograde step if the accepted law of nations came to approve such intolerable pretensions against neutrals as were set up by some American publicists during and after the war of Secession, and by some German ones during the war of 1870. Mr. Miller, to develop his theory fully, should be for restoring the good old times of non-belligerent subsidies of money and contingents of troops, with the difference that the judicious neutral, instead of being bound by treaties with his allies to furnish them such advantages in their quarrels, would be at liberty to offer them of his own motion to that side on which he finds the better right.

As to the philosophy of law in general, it is not to be supposed that the English school (so far as there is a school) rejects Hegelian or other transcendental schemes thereof out of mere blindness. One may think it impossible that there should be any philosophy of law (which itself is a kind of philosophy); and this is probably the view implicitly held by most English lawyers. Or one may think such a philosophy possible, but reject the Hegelian form of it, for instance, because one thinks Hegel's philosophy wrong in itself, and therefore not likely to be profitable when systematically applied to jurisprudence. Apart from this, again, one may hold that if there is a philosophy of law properly so called, it must be something different from the philosophy of the State in general, and constructed on more narrowly bounded data. Jurisprudence is intimately connected with

Politics, but it must be a special branch of Politics, not merely a special aspect. What strikes an English lawyer about systems of *Naturrecht* is that the lines between Ethics, Politics, and Jurisprudence, are nowhere adequately drawn. An engineer ought to be grounded in the general principles of mechanics. But you cannot learn how to make or drive a steam-engine out of Thomson and Tait's *Natural Philosophy*. The philosophers do not seem to see that jurisprudence is quite as much a special study as engineering. And so, in the theory of Jurisprudence itself, the consideration of the fitting scope and purposes of law—the teleology of law, or, in Bentham's hardly adequate phrase, the theory of legislation—is not clearly distinguished from the analysis of legal institutions and ideas as they exist in a given stage. If the English school has done nothing else, it has made a serious endeavour to work out these faintly perceived lines, to effect this unfinished distinction. Austin did not, in my opinion, make any advance at all upon Hobbes in the theory of politics. But he did make an advance—and made it all the better, perhaps, for the hardness and narrowness of his view—towards the clear conception of a theory of law distinct both from the theory of politics proper and from the theory of legislation which forms the connecting link. Not that he always applied his own distinction with success. Very few speculators do. For example, he tried to account for federal constitutions with his theory of sovereignty; a desperate or all but desperate enterprise on the face of it, inasmuch as a federation of states which preserve their individuality must have a kind of international character, and Austin had expressly excluded international relations from his conception of law. Being undertaken, however, this enterprise leads Austin (without his knowing it, apparently) clear out of the field of positive law to which he anxiously sought to confine himself, and into the field of politics—and very doubtful politics too. But such failures in detail, once found out, count for very little. Of course they must be criticised until people have left off defending them; and as Austin still has worshippers, I fear the stage of criticism is not past. Yet I would fain hope, for my own part, that the time is within sight when Austin may be put on the shelf for the respectful remembrance of teachers, and the release of students; having secured us in possession of the truism (which experience has shown transcendentalism to be strangely capable of obscuring) that for lawyers at any rate there is a highly material difference between those rules which are enforced by courts of justice and those which are not.

As to Mr. Miller's philosophy, he reviews the contents of positive law with sufficient store of illustration (and, be it said in passing, with too many citations of a second-rate or trivial kind, perhaps intended—and if so, ill-advisedly—to make the work more popular with students), in a fairly readable style, and in an inconvenient and non-juristic order, to use a barbarous term for

once. This order appears to be derived by Mr. Miller from his own meditations on the Kantian categories. Being myself of the opinion, orthodox or not, that Kant's categories are the dreariest and least profitable portion of his work, and that the whole scheme is contrary to his own better principles, I cannot pretend to be interested in this development of Mr. Miller's. The kind of result it gives him is to add to Sir Henry Maine's now well-known law of the progress of society "from status to contract" the extended formula that "society has progressed from contract (causality) to reciprocity"; which does not appear to me luminous enough to justify the wisdom of the method that gave it birth. My doubtful impression is that, if I knew what it meant, I should not agree with it. The application of the antinomies to the generalities of politics and law, which Mr. Miller proceeds to make in somewhat the same fashion, is not less ingenious and more amusing, but I fail to see that any good comes of it. And then, up and down the book we may learn such things as this: that the reason why carelessness which does no harm to any one is not a common-law offence, is "because the person offending does not set up his will as right in antagonism to the universal will". *Sir, nous diomus que tiels parols ne sont mye profitables pur lentendement del comen ley*—or in English: I must confess that, little as I like Austin, I think the present state of the English student set down to Austin is more tolerable than it would be under the dispensation of Scoto-Hegelianism. There is a certain cheerful simplicity, too, about Mr. Miller's transcendental creed. He bids critics ponder the fact that the historical development of legal ideas is in accordance with Hegel's scheme. Perhaps it is: but if any philosopher of ability, let alone Hegel, constructed a theory of development capable of being contradicted in any large application by well known historical facts, we should not only disagree with his theory, but call him a bad workman.

A lawyer, as such, exists but on sufferance in these pages. Yet I must point out that dealers in transcendental jurisprudence are apt, while their heads are in the stars, to let their feet go astray in the more terrestrial *axiomata media* of the science; and I fear Mr. Miller has not wholly escaped this peril. Thus he says that "very little of our constitutional law is due to judicial decision": a dictum hard to reconcile with a good many decisions, ancient and recent, which have been thought to have something to do with it, and of which *Bradlaugh v. Gosset*, the latest example, is also a good typical one. His occasional remarks on American institutions appear to confuse things which are accidental and may be the expression of a particular theory with things essential for the existence of a federal state. The Supreme Court of the United States has to judge of the validity of legislative acts, not because of a modern "tendency to disregard form in order to attain substantial justice," but because neither a

federal legislature nor the legislatures of the federated states can be allowed unlimited powers if the federation is to be a reality. The two or three pages on the early history of Contract are not only too vague and slight in themselves, mixing up fact and hypothesis, as the farmer's daughter jumped over tables and chairs, "with apparent ease," but they might well mislead students by letting them suppose that an exceedingly difficult subject is an easy or an exhausted one. Now, if we cannot trust Mr. Miller in the Constitution of the United States or the history of Roman Contracts, which we have seen, how shall we trust him in things in general which we have not seen?

The book is, to its credit, well indexed. And there is a classified bibliographical appendix of which the general idea is meritorious. But in execution it is too little for completeness and too much for a select list. Oddly enough, Mr. Justice Stephen figures among the historical school. He ought to go with Hobbes and the utilitarians, of whom he is the legitimate and uncompromising successor: in dealing with the Criminal Law he has been historical perforce, not of freewill. Small matters these may be in themselves: but we profess a science and art which are nothing if not critical. Philosophy is well, but exactness in one's own business is first.

If I may add one word of counsel to those who seek to gather treasure abroad for the philosophical study of law, I would say: 'Go not after Hegel, nor any other philosopher who explains law because he must explain everything; but seek after the philosophical jurists who know law first, Savigny, Bluntschli, Holtzendorff, Ihering, Holmes: and you shall find your reward'.

F. POLLOCK.

Logik. Eine Untersuchung der Principien der Erkenntniss u. der Methoden wissenschaftlicher Forschung. Von WILHELM WUNDT. Zweiter Band. 'Methodenlehre.' Stuttgart: Enke, 1883. Pp. xiii., 620.

This work is the supplementary volume on the subject of general Logic to one which appeared four years ago (reviewed in *MIND* XIX.). As the names *Erkenntnisslehre* and *Methodenlehre* imply, the earlier volume dealt rather with the formal and abstract aspect of Reasoning, whilst the latter is devoted to a somewhat detailed examination of the principles, methods, and results of the special sciences. It is an astonishing product of ability and industry. No important branch of science, whether physical or mental, is passed over without a careful examination, extending from its earliest history to its very latest developments; and the knowledge thus displayed is—at least within any power which the writer of the present notice has to judge—as accurate as it is extensive. The only English works which will give the

reader a notion of the general scope and plan of the author are, perhaps, *The History* and *The Philosophy of the Inductive Sciences* by Whewell; but it must be admitted that these stand a very long way second in respect of catholicity of comprehension and minuteness and accuracy of treatment.

As the reader may already infer, any attempt to give a detailed critical examination of such a work is out of the question. Of the only two remaining alternatives, *viz.*, that of singling out a few of the leading ideas for examination, or of giving, without criticism, a brief summary of the main details of treatment adopted by the author, the latter, though less attractive, will probably be far more convenient to the reader. The work begins with an examination into the foundations of Induction and Deduction. The question raised here is as to the elementary methods of which these operations are the outcome. These methods are found to be Analysis and Synthesis, each of which exists in three different stages: *e.g.*, the former, in that of the merely elementary analysis of common life, the causal analysis of a phenomenon into its necessary sequences, and what may be termed logical analysis. The first of these stages (as explained in the earlier volume which dealt with the more formal part of the subject) leads naturally to the common disjunctive proposition; it merely separates the complex data of nature into their more obviously constituent elements. The second covers the ground of comparatively systematic or scientific thought, its practical application being found in the recognised experimental methods of science. The third takes a wider view, aiming at the discovery of all the determining conditions, but seldom completely succeeding except where, as in the fields of Mathematics and of Law, the concepts with which we deal are wholly or in great part our own mental construction, so that we can, so to say, get to the real bottom of them. These general methods are then regarded in their principal logical applications, *viz.*, Abstraction and Determination, Deduction and Induction. Of these processes the second and fourth are respectively regarded as the inverse of the first and third. Abstraction is a process of elimination, and is divided into what are termed respectively *isolating* and *generalising* abstraction. (This, it may be remarked, is the solution given by Prof. Wundt to the question sometimes raised in our text-books as to whether it is possible that there should be abstraction without generalisation: his answer in effect is that the two processes are really quite distinct). Determination, again, is the inverse of abstraction, and yields the two subdivisions of Colligation and Specification. This colligation, it should be observed, is not used in Whewell's sense, but signifies the artificial reintroduction into a phenomenon of those modifications which had been laid aside from consideration during the previous process of abstraction. Specification is used more in its ordinary sense, of proceeding from a genus to the species or the individuals, by the addition of limiting attributes or concepts.

On the general question as to the nature of Induction, Prof. Wundt inclines to the view that it is the inverse of Deduction. But this needs a little explanation, as his account of their mutual relations does not seem to me to be by any means the same as what is commonly understood by the expression. As I apprehend the matter, the statement of the inverse relation should be as follows:—Deduction starts from given premisses and obtains a certain conclusion; the inverse process to this is to assume the conclusion as given, and to inquire, What must have been the premisses from which this conclusion was derived? The answer to this question is, of course, in the majority of cases indeterminate in character. That this was the view of Jevons, who first introduced the particular technical expression 'inverse' into use, there can, I conceive, be no doubt: in fact, a section of the *Principles of Science* is devoted, under the heading of "The Inverse or Inductive Problem," to this precise problem, *viz.*, Given a result, what were the propositions from which this result might have been derived? But such a problem as this, it must be remarked, though indeterminate is absolutely certain; that is, though different groups of possible premisses might be selected, yet any one of them will necessarily yield the conclusion: there is nothing in this conclusion, as Jevons repeatedly admits, which is wider than the premisses. But in the tabular scheme of Induction and Deduction, given by Prof. Wundt (p. 21), we have them arranged in the familiar plan commonly adopted by interpreters of Aristotle, *viz.* :—

INDUCTION.

SP
SM
MP

DEDUCTION.

MP
SM
SP

with the express notification that Induction is of the nature of the third figure. I do not see the propriety of terming this an 'inverse' relation. The view of Jevons, as of Whewell, who had taught substantially the same doctrine though he had not introduced an appropriate technical term to designate it—was that *no* rules whatever can be given for Induction. We must simply assume our premisses, by practical and sagacious guessing, reason deductively from them, and test the conclusion by experience. It does not at all seem to me to describe their view to say with Prof. Wundt that "every Induction is a conversion (*Umkehrung*) of the ordinary syllogism of subsumption of the first figure".

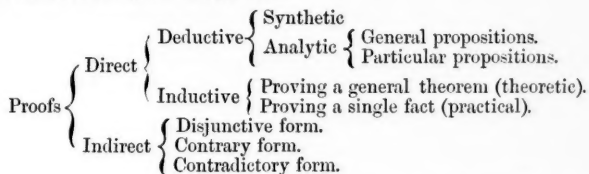
A little further on, the same question is touched upon again. Discussing the methods of Induction, he distinguishes between two operations, *viz.*, (1) that of limiting the possibilities by a due recourse to Analysis and Synthesis, and then (2) arguing hypothetically from each such assumption in turn and comparing the result with experience. This latter seems to me exactly what Jevons understands by Induction, but as Prof. Wundt says it is fundamentally of the character of Deduction.

Turning to Definitions, we find the distinction between those which are *real* and those which are *nominal* kept up; in the sense that the nominal is understood to be the mere substitution of one word for another which may be less known, just as we may translate a sentence into a better known language. The real, on the other hand, looks to the scientific connexion of the words or concepts, and the relation in which the phenomena with which they are connected stand towards each other.

The main principles of Scientific Classification are fully and clearly explained. In place of the ordinary distinction between natural and artificial classification is substituted a three-fold one into the *descriptive*, the *genetic*, and the *analytical*. The merely descriptive one takes account solely of the co-existence of the attributes possessed by the things which are to be arranged, without seeking after their inner connexion or their origin. So far we are resorting to Analysis only. As we then proceed to appeal to Synthesis—either by active construction or more passive observation, according to the nature of the subject-matter—we begin to obtain a genetic classification in which the production of the determining attributes has to be considered. The province of Mathematics of course offers the most wide and familiar illustration of this stage, as when, to take a simple example, we arrange the various curves of the second order according to the processes of construction by which they may be obtained. But wherever possible, we want to proceed further in the way of synthesis than this. We seek to know not merely the mode of production of the constituent elements of our concepts, but to obtain the fullest possible expression of the permanent relations of these elements to each other. This involves a fresh appeal to Analysis, and leads to the analytic classification in the narrower sense of the term. It differs from the descriptive in that it does not merely study the arrangement of the attributes but aims at a full account of the laws by which they are mutually connected. Like the preceding it is hardly attainable except where, as in Mathematics and to some extent also in Jurisprudence and Political Economy, we are able to penetrate to the essence of the notions with which we deal, owing to the extent to which they are of our own construction.

The Doctrine of Proof follows the same leading division; that is to say, the distinction between Analysis and Synthesis is taken as the principle of classification amongst the different kinds of proof. As the consequent arrangement is very different from that which is given in any of the hand-books familiar in England, it may be desirable to describe it somewhat more fully than would otherwise be expedient. It resembles in some respects that which Lotze has given in his *Logik*, but is more elaborate; moreover, on some points Prof. Wundt distinctly rejects the scheme of his predecessor. Starting then from the commencement we divide into *direct* and *indirect* proofs, in the former the thesis

itself being established, whilst in the latter we aim at disproving all the possible counter-theses. The direct proofs fall, in accordance with the main division of scientific method, into the *deductive* and the *inductive*. The process of Deduction may be carried out either *synthetically* or *analytically*. By this is meant that we may either assume that the requisite premisses have been somehow obtained, and then argue from them to the conclusion; or, starting with the conclusion only as definitely before us, reason from it to such consequences as will establish it. The former corresponds to the familiar Aristotelian syllogism, which has thus obtained far more prominence than its comparatively subordinate position fairly entitles it to. Its main merit consists in its comparative convenience and elegance: its defect is found in the fact that there may often be nothing in the process to suggest how and why the premisses came to be chosen, the conclusion by no means obviously leading up to them. On the other hand, the analytic process is more orderly in respect of practical convenience, as it reasons from the conclusion which is confessedly before us. It is subdivided into two, according as the consequences consist of *general* propositions including and establishing the thesis—these Prof. Wundt terms *categorical*, in that we thereby acquire certainty equal to that of the synthetic process—or as the consequences are *particular* facts. This last is called *hypothetical*, in that the conclusion is only a more or less probable one. The Inductive proof again is divided into the *theoretic* and the *practical*, according as what we seek to establish is a general proposition or a single fact. The former of these is naturally more prevalent in the province of science and the latter in that of common life and that of the criminal law courts. As regards indirect proofs the distinctions amongst these are made to rest upon what seem more artificial grounds, *viz.*, the number and the nature of the alternatives amongst which we have to choose. They are termed respectively:—*disjunctive*, when we have three or more positive alternatives, A, B, C, at our selection; *contrary*, when we have two only, these being each marked by positive attributes (such as, in fact, are often termed material contradictories); and *contradictory*, when the alternatives are of the formal A and not-A description. The scheme of arrangement might therefore stand as follows:—



So far we have been considering the General Introduction. As regards the more detailed discussion given to the special sciences,

the priority is naturally assigned to the most abstract, *viz.*, Mathematics. One of the first inquiries meeting us here is the special use and significance of the processes of Analysis and Synthesis as applied to this science. The common but extremely vague employment of the former term, as in 'Analytical Geometry,' calls for some determination. Prof. Wundt assigns the leading place in the interpretation to the two following characteristics:—It will be remembered that Analysis is always supposed to take a proposition for granted; it then proceeds to deduce consequences therefrom, and the verification of the proposition is rested upon the acknowledged truth of these consequences. Now, in mathematical analysis, according to the general conception of it introduced by Descartes, there are two reasons why the process is distinguished from the ordinary application. One of these is found in the employment of algebraic symbols. By their use we are enabled to secure, over a vastly enlarged range of cases, the condition that some element shall be considered as known or given; for all the elements of the problem, whether originally included among the data or not, admit of equally easy representation by means of symbols, and it becomes easy then to detach and isolate the one which we require. The other consists in the fact that we couch our expressions in the form of equations. The defect of the ordinary analytical process is that the deduction of a true consequence is no necessary proof of the truth of the premiss, but only confers upon it a greater or less degree of probability. But if the consequence and the ground are reciprocally connected, *i.e.*, if the former necessarily carries the latter with it, matters are altered. Now this is obviously the case in Mathematics, for the equational form is convertible, and the relation of equality enables us to proceed with certainty from consequence to cause in a way which could not generally elsewhere be allowed.

The more detailed examination into the logical nature of mathematical assumptions and processes is too intricate to interest, or indeed be intelligible to, any but professed mathematicians; but a few remarks may be made upon the treatment of such critical questions as the foundations of the Differential Calculus and the explanation of the 'Infinite'. On the former of these two points Prof. Wundt's account is very full and suggestive. He distinguishes and discusses the characteristic assumptions in each of the three main accounts of the basis of Differentiation: *viz.*, the doctrine of Infinitesimals, that of Limits, and that of Derived Functions or of Expansion; accounts which may, roughly speaking, be connected with the three great names respectively of Leibniz, Newton, and Laplace. But, though not regarding these as really hostile views, he seems to recognise in them a reality and depth of distinction which many will hardly be able to follow. This point is connected with a view which he has expressed in an earlier chapter (on Number) on the possibility of admitting, as

an element in calculation, the infinitely great and the infinitely little. Here he has some remarks which will seem rather hard sayings to what may be called old-fashioned mathematicians. Speaking from this latter standpoint, and with an acute consciousness that those who have not followed the speculations of later mathematicians cannot judge adequately of the question in dispute, I must confess to feeling considerable hesitation and doubt here. With regard to the contradictions found to attend the notion of anything *absolute* in infinity, in either direction in which it may be taken,—as illustrated alike by mathematical philosophers like Berkeley and by the non-mathematical like Hamilton,—these seemed almost entirely avoided by adhering to the conception of a 'limit'. All geometrical difficulties seemed to be smoothed when we assumed that a differential coefficient simply indicated the rate of change of some variable element—a perfectly determinate magnitude; that all magnitudes were to be regarded as essentially finite; and that all that was meant by calling them infinite was to consider them capable of indefinite extension or diminution: the value 'at infinity' or 'at nothing' being the value—again perfectly determinate and as a rule finite—towards which we found the variable magnitude or its function to continually tend. Now, as against all this, at least as against its completeness, we have the conception introduced of the absolutely infinite number. "By reason of the perfected freedom of conceiving (*Begriffseceptionen*) enjoyed by mathematics, it is possible to assume that there is an absolute value $\omega = \infty$, which not only marks the limit to which the series of numbers approximates without end but in which this limit is actually attained" (p. 127). And various consequences are deduced from this assumption, such as that the ordinary law of commutation may fail for these "transfinite" numbers—as they are called in distinction from the commonly recognised infinite numbers—so that though $1 + \omega = \omega$, we may have $\omega + 1 > \omega$. This distinction between transfinite and infinite (which is not, of course, Prof. Wundt's own introduction, but taken from the speculations of some advanced mathematicians) is repeated in the discussion upon the foundations of the Differential Calculus, and it is maintained that the neglect of it has marred the analysis and criticism of other authors.

After the discussion of the more abstract subject of Mathematics, we come to what is one degree more concrete, *viz.*, Mechanics. This section is mostly devoted to a minute account, partly historical, partly critical, of the various general principles which have been assumed or deduced in order to explain the observed facts of nature, so far as motion is concerned. Thus we have as a starting-point some of the principles assumed by the early Greek investigators, *e.g.*, their rather crude doctrines of mechanical causation on the one hand, and of teleology on the other. These are explained and tested, and it is inquired to what extent

they withstood, or were modified by, the advance of the spirit of independent criticism. Coming to more modern times, the first prominent figure in this particular direction is that of Galileo. His principle of Conservation is passed in review; and its relation to Newton's three laws, and in particular to the doctrine of Inertia, is considered. A considerable part of the chapter is occupied with an account of the two opposed doctrines of Momentum and *Vis Viva*, in the well-known dispute as to which was to be considered the truest measure of force. These are fully discussed and described, both as originally held by Leibniz and others, and also as modified by subsequent investigations. As Prof. Wundt remarks, the modern doctrine of Energy, of which that of *Vis Viva* was a particular dynamical case, has given a vast extension and consequent triumph to the latter. But the generalisations to which the former has given rise are by no means unimportant. In particular, the wide physical generalisations, such as that which is known as the Conservation of the Moment of Momentum, and its importance in cosmological theories (such, we may remark, as certain speculations of Mr. Herbert Spencer in this direction) are noticed. Another instructive discussion is that which is devoted to the various modifications of Maupertuis' Doctrine of Least Action, which Prof. Wundt maintains to have been, in its original form, an almost purely teleological principle in the way in which it regarded Nature as the great Economist of Force. The same principle is examined in the forms which it successively assumed in the hands of Laplace, Rowan Hamilton, and Jacobi. "The maximum and minimum principles have at last assumed their final form in the Principle of Least Constraint established by Gauss. According to him the movements of a system of masses, however the masses may be connected together, take place at every moment in the utmost possible agreement with their free movement, and therefore under the least constraint. As measure of the constraint, is taken the sum of the products of every mass into the square of its departure from free motion" (p. 265).

Generalisations such as those afforded by these laws of motion offer an admirable field for logical investigation in the attempt to examine their independence and comparatively fundamental or intuitive character. Though mostly too wide and abstract to lend themselves readily in any direct way to constructive purposes, that is, to the establishment of concrete facts, they will often serve as most convenient short cuts to the disproof of particular theories or alleged facts. To take a somewhat analogous example, it is needless to remind the reader what a number of alleged inventions can be summarily dismissed by pointing out that they are at variance with the doctrine of the impossibility of perpetual motion.

The next chapter is devoted to the Logic of Physics, and covers more nearly the ground familiar to English readers as being

occupied by the well-known treatises of Mill and Jevons. Thus it begins with a discussion upon the analysis of natural phenomena preliminary to Inductive processes, and then proceeds to give the following logical rule as a substitute for the more numerous rules of Herschel and Mill:—"Amongst the circumstances which accompany any phenomenon those are to be regarded as essential conditions upon whose removal the phenomenon itself is removed, and whose quantitative alteration produces a quantitative alteration in the phenomenon". This rule points to two experimental methods which may be briefly designated as those of Elimination, and Graduation of Conditions. A moderate criticism of Mill's well-known five methods follows, resting in great part on the ground that several of them are merely specialisations of others.

After the qualitative determination of phenomena and their conditions, follows in natural order their quantitative determination, for without this little progress is attained in physical inquiry. Mill has scarcely touched at all upon this department. Some of the principal considerations to which it leads are those of the various physical adjuncts and improvements to Observation and Experiment—such for instance as microscopes, telescopes, &c., which are briefly indicated and described—but still more important, from a logical point of view, are the very intricate questions of the establishment of *units* for physical investigations. Such units are naturally divided into those of Space, of Weight or Mass, and of Time. The qualifications to be demanded of these, and the nature and extent of their mutual independence, are discussed; and it is shown how in the progress of modern science the two latter kinds of unit tend almost invariably to become dependent upon the former; as when (to take familiar instances) intervals of time are measured by the movement of the hands of a clock, or differences of weight by the position of the index of a balance.

This chapter concludes with a discussion of some of those border-questions of philosophy and physics, as to the limits (*Grenzbegriffe*) to be admitted in either direction: *viz.*, in the one direction, whether the atom or molecule is to be considered as of finite size, and in the other whether the physical universe itself is to be considered as limited. Discussions of this kind have become to some extent popularised in England through such works as the *Unseen Universe*. Prof. Wundt recognises six distinct assumptions on this topic which deserve separate discussion: *viz.*, that the hypothesis of absolute limitation may be considered to embrace time only, mass and space being unlimited; or time and mass, space alone being unlimited; or all three alike. And the same division may be made in respect of the hypothesis of absolute infinity. The discussion, in his treatment of it, involves the distinction noticed above between the merely infinite and the absolutely transfinite. He considers that Kant's

statement of the Cosmological Antinomies has been vitiated by his neglect to realise the distinction in question. The whole discussion is well worth study, but I confess to feeling the same doubts here, as in the mathematical region, as to the propriety of the distinction. If one may raise an objection in a few lines on such a subject, I should suggest that in Mathematics we are dealing mainly with our own constructions and that therefore such infinity as we admit must be of the kind commonly recognised in Mathematics, meaning thereby that we can conceive our adding or diminishing without limit to the magnitudes which we contemplate. But when, as in Physics, we are dealing with what is given to us rather than constructed by us, the infinity which we contemplate must surely be of the absolute kind. An 'infinite line' is a finite one which we are to increase without limit, but 'infinite space' or an 'infinite universe' is not our making at all, and we cannot thus treat them.¹

We now come to the Logic of the Moral Sciences. This commences with Psychology, against the ordinary traditional treatment of which Prof. Wundt has some forcible remarks: "a systematic self-observation as recommended by most psychologists is nothing but a source of self-deception". We must, he considers, in order to eliminate as much as possible the perturbing influence of the observation itself, direct attention mainly to the accidental and unexpected phenomena; whence the two following rules may be deduced:—Depend as much as possible on memory rather than on simultaneous observation; and let the introspection (or retrospection) be directed especially to the most definite and voluntary mental acts. Under such conditions as these Psychophysics forms one of our most important helps. It is defined as proposing "to produce by physical modifications or stimuli (*Einwirkungen*) changes in the states of consciousness, from which conclusions may be drawn as to the origin, combinations, and duration of psychical processes". More closely scrutinised it divides itself into the three following tasks: (1) the discovery of the relation between the elementary psychical phenomena and their physical and physiological accompaniments; (2) the analysis of composite presentations in respect of their elements and laws of production; (3) the investigation, in respect of quantity and quality, of the time-element of our presentations. The first of these subdivisions

¹ As bearing on Prof. Wundt's use of the term 'transfinite' in geometry, the following remarks may be quoted: "The point of intersection of two parallel lines has still a geometrical sense when we suppose the parallelism to be complete, and therefore the infinity of the distance to be an absolute one" (p. 375). I cannot follow this or comprehend the admission of 'transfiniteness' into geometry. If we are to talk in any other than a 'limit' sense of this point of intersection, ought we not to admit *two* such points, one in each direction, for we have no right then to say that positive and negative infinity are the same thing: and how does this differ from an assertion that two such straight lines enclose a space?

corresponds to Psychophysics in its strictest sense: the two latter cover rather the ground of Experimental Psychology. The former therefore is naturally devoted to a short account of Fechner's well-known methods and laws. A good example of the second is found in Wheatstone's discovery of his explanation of the laws of binocular vision. The last is concerned with problems of which an example may be found in the determination of the length of time required for a reaction to any stimulus, for recognising an object whether familiar or not, and so forth.

After these direct inquiries into the elementary phenomena of the normal mature mind, follows a discussion of the resources at our disposal for considering, by means of Comparative Methods, the more abnormal phenomena. This inquiry is divided into four main sections: *viz.*, the comparative examination of other intelligent creatures of a lower order (*e.g.*, the brutes as treated by Sir J. Lubbock); the psychical characteristics of infants and children; the phenomena of disturbed understandings, or those which have never been developed (*e.g.*, the insane, the idiot, and the savage); and, lastly, those finer distinctions which present themselves as characteristics of whole races, and which may be regarded as a sort of international Psychology. These four fields of inquiry are classed together under the head of Comparative Methods of Psychology. Each admits again of a further twofold division in respect of the method which is to be applied to it, *viz.*, the *individual* for the *generic* method. The individual method examines the psychical characteristics of an individual or of any such group of allied individuals as may, for purposes of study, be reckoned as a unit. This inquiry for various reasons has rather an observational than an experimental character. The generic method seeks to detach some single psychical function, or connected group of such functions, in order to test its nature and development over a wide range of observation. Both these methods have to depend in actual practice upon the same general logical operations as we have to work with when engaged in scientific observation elsewhere; *viz.*, partly on what Prof. Wundt calls the methods of Agreement and Difference, and partly on those of Combination and Separation.

The next main division to the Comparative is found in the Historico-psychological Method, which is of course nothing but an extension of the comparative method by its application to past time. The history which is thus demanded is naturally of a very special description. From the main stream of what constitutes the bulk of the science for the general student it has to select, say, the history of a word and its implied psychological interpretation; the history of a belief, of a practice, and so on. The principal special applications of this department of study which have hitherto been prosecuted to any good purpose seem to be the comparative sciences respectively known as those of Philology, Mythology and Ethics.

The second chapter is devoted to the consideration of the Logic of the Historical Sciences, and commences with a discussion as to the general position and objects of Philology and History. To this succeed Philological Hermeneutics and Criticism; the function of the former, as I understand it, being to explain the nature and conditions of any phenomenon or event in the moral world, for the present reference is of course to this only,—a process analogous to many which have to be performed in the material world: whilst Criticism is essentially confined to the process of clearing away the intermediate confusions or errors which have arisen in the process of getting at the phenomenon. We can undertake to interpret nature itself, but we can only undertake to criticise some human view or account of it, so that the applications of the two closely allied sciences are considerably different. The principles regulating the interpretation and authentication of MSS. come in for discussion at this point.

In respect of the attempted Science of History, in the sense at least in which it was contemplated by Comte and Buckle, Prof. Wundt has some forcible objections to make. The attempt of Buckle to deduce, by the merely Comparative Method, laws of historic sequence, he entirely scouts, considering that "rain follows sunshine" would be of as much scientific value as his well-known generalisations about the relatively decreasing importance of the intellectual motive factor in human life. He regards History as far too vast and varied, as well as (what is an even more important point) too unique in character at every stage, to yield itself to this comparative method: one might as well attempt, by mere comparison of remote geological epochs in the history of our planet, to deduce the laws of physical causation.

The final chapter in this part is devoted to the consideration of the Social Sciences. These are related to the Historical Sciences in that they consider the simultaneous rather than the successive states of Society; but they can, for their due explanation, no more dispense with the latter than could, for example, in the physical province, Physiology dispense with the evolutionary element. They constitute in fact what Mr. Spencer terms the Statics as contrasted with the Dynamics of the subject—(the particular analogy here suggested is however rejected as misleading). Amidst the mass of loose generalisations and confusion of departments which have gained currency under the name of Social Science, two departments at any rate may be singled out as depending upon distinct and well-justified scientific resources. The first of these is Ethnology, a science which though dealing with both the physical and moral sides of man belongs essentially to the latter, in that the physical characteristics derive all their interest and importance from their bearing on the moral. The second is at present in little more than its commencement. (The terms used for them are respectively *Ethnologie* or *Völkerkunde*, as opposed to *Demologie* or *Bevölkerungskunde*.)

Whilst the former separates man into the branches determined by descent and historic influences, but pictures each of these in every aspect of its spiritual life, the latter starts with a single determinate community in order to contemplate the isolated facts involved in it, and then to subject these to examination in respect of their mutual relations.¹ The discussion of these distinctions leads to a short account of the functions of one of the principal instruments at their disposal, *viz.*, Statistics, and the employment of this science in the Theory of Probability and for practical, legislative and other purposes.

Political Economy follows as the next of the Moral Sciences whose methods are to be discussed. Its treatment is divided into two sections, devoted respectively to the abstract view of the subject most familiar to Englishmen, of which Ricardo is the typical representative, and to the modern historical school of which something is known in our country by the writings of Cliffe Leslie, and (at second hand) of Roscher. The former of these is severely criticised, being complained of, amongst other grounds, as resting on assumptions which are far too wide of the truth to be able to claim the support, often urged on its behalf, of the analogy of Mechanics; and also as leading almost inevitably to confusion between what *is* and what it is expected *should* be.² With this abstract procedure is contrasted the concrete or historical one, the radical distinction between them being found in the use they respectively make of statistics: the former only appealing to them for verification and partially, the latter starting from them as the groundwork and aiming at a complete examination of all that are in any way relevant.

The work concludes with a brief criticism of the various Methods of Philosophy, the results being naturally examined, in part, in the light of the foregoing discussion of the methods of the detailed Sciences.

JOHN VENN.

¹ Otherwise expressed—"Die unterscheidenden Eigenschaften der Völker, mit denen sich die Ethnologie beschäftigt, wie die inneren Zustände der Bevölkerungen, welche die Demologie untersucht".

² The prevalence of this system amongst ourselves is found to be connected with the greater egoism of the British character as compared with the broader ethical standard of the German. Such deductions from national character seem a little hazardous. If the facts had had to be explained in the reverse way, might we not have had it pointed out that the painful elaboration of historical details was connected with the incurably empirical tendency of the Briton? This would probably have been the verdict fifty years ago.

VI.—NEW BOOKS.

[These Notes do not exclude Critical Notices later on.]

The Metaphysics of the School. By THOMAS HARPER, S.J. Vol. III. Part i. London: Macmillan, 1884. Pp. xix., 414.

The author (whose first two Volumes were reviewed at length in MIND XXV.-VI.) has felt compelled to break up his Vol. iii. into two Parts, reserving for the second Part the Discussions on Free-will, and the Chapters on Final Cause, Exemplar Cause, &c., which conclude, according to the design, his 5th Book on "Causes of Being". The present Part is wholly occupied with the exposition of Efficient Cause; Formal Cause and Material Cause having been disposed of in the previous Volume. The treatment follows the careful and exhaustive method to which Father Harper has accustomed, and indeed introduced, the degenerate present-day readers of his previous Volumes. A feature of special interest is an Appendix (pp. 79-152), in which he brings face to face with modern science the teaching of S. Thomas concerning the efficient causes of the generation of living bodies, having already in Vol. ii. done the like for the teaching concerning the genesis of the material universe: to this Appendix and the Part generally, we hope to return in a future Number. The Discussions on Free-will, to come in the next Part, will alone occupy from three to four hundred pages, it being deemed "advisable to give due prominence to a question of such paramount importance . . . more particularly in view of the fact that the most strenuous efforts have been made by a certain class of writers to erase the idea and term [Free-will] out of our modern 'philosophy'." All genuine philosophical students must hope that the author's illness which has interfered with the completion of his present Volume (though much of the second Part is already written) will soon leave him free and in full vigour to finish not only the Volume but all that still remains of his vast undertaking.

Essays on the Philosophy of Theism. By the late WILLIAM GEORGE WARD, Ph.D., sometime Fellow of Balliol College, Oxford, and Professor of Moral Philosophy and Dogmatic Theology at Old Hall College, Ware. Reprinted from the *Dublin Review*. Edited with an Introduction by WILFRID WARD. 2 vols. London: Kegan Paul, Trench, 1884. Pp. xxviii., 390; viii., 349.

The seventeen Essays reprinted in these volumes range, in the time of their original appearance, from April 1867 to January 1882, the author's death having followed six months after the publication of the last of them. The three earliest, "Science, Prayer, Free-will and Miracles," "Explicit and Implicit Thought," "Certitude in Religious Assent," written before April 1871, but placed here towards the end of the second volume (xiv.-xvi.), give by themselves a fairly exhaustive notion of the extent and limits of his philosophical interest, also no inadequate representation of his peculiar gift of incisive argument; after these, is placed last of all (xvii.) an Essay on "The Extent of Free-will," published in July 1881, in reply to a challenge thrown out by Professor Bain in MIND XVII. and not sufficiently met when in the following No. (April 1880) Dr. Ward was willing for once to break a lance before less sympathetic spectators than the fellow-Catholics

before whom he was in the habit of tilting in the *Dublin Review*. The other Essays (i.-xiii.) are the complete series of papers which he was able to produce in pursuance of a plan, formed from 1871, for the philosophical establishment of Theism more expressly against "those antitheists who profess the phenomenal philosophy". The enterprise, as his son and editor states in the vigorous Introduction to these volumes, fell into two parts, only the first of which—dealing with "the fundamental fallacies in the Experience-system of philosophy, as represented especially by the late Mr. Stuart Mill, and the absolute necessity of admitting the power of the human mind to perceive with certainty some immediately evident truths beyond the phenomena of consciousness"—he considered himself to have accomplished. The second part of his task—"to draw out, on the principles thus established, an argumentation exhibiting the various intuitions in the intellectual and moral order, truths of observation and deductions, whereby the existence of a Personal God, with the characteristics which Theists attribute to Him, may be established"—he was barely able to indicate in "Ethics and its Bearing on Theism" (1880, here xii.) and the latest Essay of all, "Philosophy of the Theistic Controversy" (1882, xiii.). Of the others, one (xi.) is a reply to the exhaustive criticism which Mr. Shadworth Hodgson made in *MIND* XVIII. on the various pieces (vi.-x.) which the author had been producing on the subject of Free-will and of Causation from April 1874. The first five, opening with "The Rule and Motive of Certitude" and then occupied with a consideration and more than one reconsideration of Mill's views on "Necessary Truth" and the "Foundation of Morality," are (with the latest Essays, xiii., xiv.), those of the whole series which, though their interest is now in various ways lessened, still call for more detailed notice in these pages. It is certainly matter for congratulation that work of so much intrinsic force, as well as representative importance, should, in these carefully edited volumes, have been brought into public view from the comparative seclusion in which it went on.

Logic, in Three Books of Thought, of Investigation and of Knowledge. Also Metaphysic, in Three Books, Ontology, Cosmology and Psychology. By HERMANN LOTZE. English Translations edited by BERNARD BOSANQUET, M.A., Fellow of University College, Oxford. Oxford: Clarendon Press, 1884. Pp. xxiii., 538; xvi., 539.

Some preliminary account was given in *MIND* XXXIV., 323, of the contents of these two volumes, on the appearance of which the editor and the other translators as well as the Clarendon Press are to be congratulated. The translators of the *Logic* are Mr. R. L. Nettleship, Mr. F. H. Peters, Mr. F. C. Conybeare, the Editor and Mr. R. G. Tatton; of the *Metaphysic*, the late Prof. Green, the Editor, Rev. C. A. Whittuck, and Prof. A. C. Bradley. The whole being revised by the Editor (who is responsible in every case for the rendering finally adopted), a better result has been attained by such co-operative effort than was likely to be achieved by any single hand, however competent, over so large a field. Both volumes will, it is hoped, before long be subjected to detailed criticism in these pages; the originals, in which the lamented author deposited his maturest views, having had their appearance merely chronicled—the *Metaphysik* in 1879, 2nd edition of the *Logik* (after the 1st in 1874) in 1880. Of the intended Vol. iii. that was to conclude the "System" with Practical Philosophy, Aesthetic and Philosophy of Religion, no materials were found after the author's death sufficiently advanced for publication excepting the paper subsequently published in *Nord u. Süd* (June 1882) under the title "Die Principien der Ethik".

Philosophy of the Unconscious. By EDUARD VON HARTMANN. Speculative Results according to the Inductive Method of Physical Science. Authorised Translation by WILLIAM CHATTERTON COUPLAND, M.A., B.Sc. 3 vols. London: Trübner, 1884. Pp. xxxii., 372; vi., 368; viii., 360.

A task requiring more patient and persistent effort, also more varied ability if it should be well performed, could hardly be chosen by a single worker than the rendering into another language of such a conglomerate production as the famous *Philosophie des Unbewussten*. Mr. Coupland has done his work with no common skill and, at the same time, so far as we have been able to test at different points, with remarkable fidelity to the original—though we have hit upon slips here and there of the kind that seems inseparable from the labour of translation when more than one pair of eyes are not turned upon the same text. To sustain him throughout his long labour, which has left aside not one of the many supplementary notes and seeks to do justice also to the series of prefaces begun with the seventh edition, the translator has not had any immoderate opinion of his author if we may judge by the measured words of his own short Preface. They include, however, with reason, the expression that “when criticism has done its worst, there will be enough of worth left to justify the enthusiasm the *Philosophy of the Unconscious* has evoked in the land of its birth, as also to secure it a welcome from a wide circle of new and appreciating readers”. It is now sixteen years since the author, then only twenty-seven, burst upon the world with the huge outcome of his early thought, and how little he had then exhausted his productive power, the fifteen or sixteen independent works—two or three of them hardly of less size than the first—are there from the succeeding years to show. The more important of these have not been overlooked in this Journal as they appeared, and the opportunity has not been otherwise wanting to pronounce upon his “speculative results”. Though sought “according to the inductive method of physical science,” the *Philosophy of the Unconscious* presented them in a form not exactly suited to our insular mind; but it is certainly well that, if they were to be made directly accessible to English readers, it should be in the fresh and genial exuberance of their first statement.

Metaphysica nova et vetusta. A Return to Dualism. By SCOTUS NOVANTICUS. London: Williams & Norgate, 1884. Pp. xi., 182.

“The synthesis (says the author) required for the perception of objects was the aim of Kant’s Analytic, and he certainly was right in maintaining that such synthesis was impossible to mere Sensibility. It seems to me, however, that he was wrong in concluding that there was no possible real content of knowledge save in and through Sensibility (*a priori* and *a posteriori*). Not only do we know the functions of Reason as such, but (as I shall attempt to show) these functions throw into Consciousness pure percepts which are themselves real and true content of knowledge; and which, further, are not merely regulative, but constitutive of the external. . . . My standpoint is psychological, and my metaphysic is psychological or phenomenological metaphysic. . . . On the other hand . . . I am not to be understood as holding that either scientific Psychology or Ethics is possible save as grounded in Metaphysic.”

Sleep-Walking and Hypnotism. By D. HACK TUKE, M.D., LL.D., Fellow of the Royal College of Physicians, Lond.; Co-editor of the *Journal of Mental Science*. London: CHURCHILL, 1884. Pp. vi. 120.

A paper on "Sleep-Walking" (46 pp.), read lately at a meeting of the Metropolitan Branch of the British Medical Association, is here followed by a report (10 pp.) of a "Case of Spontaneous and Induced Sleep-Walking," by another paper, read to the Medico-Psychological Association, on "The Mental Condition in Hypnotism (Artificial Somnambulism)" (44 pp.), and by a detailed description (pp. 15) of experiments with Baird's method of hypnotising which the author saw M. Charcot carry out at the Salpêtrière in 1878. His interest in artificial somnambulism as a psychological study has extended over many years; as far back as 1865 he drew attention to the important bearing of the phenomena comprised under "Braidism" upon mental affections, at a time when as yet the experiments of Braid had got little notice from medical men. At the end of the first paper is printed (pp. 47-50) a list of questions for the use of those who would help in elucidating the phenomena of Sleep-Walking.

A Text-Book of Deductive Logic, for the use of Students. By P. K. PAY, D.Sc. (Lond. and Edin.), Professor of Logic and Philosophy, Dacca College. Calcutta: Thacker, Spink; London: Thacker, 1884. Pp. xv. 335.

"The work consists of three Parts, with an Introduction and an Appendix. The first chapter of the Introduction treats, in the first place, of the definition and province of Logic, and then proceeds to the special subject of the book and lays down its scope and limits. The second chapter explains the fundamental principles of Deductive Logic. The three Parts then treat successively of Terms, Propositions and Deductive Reasoning. . . . The Appendix is partly supplementary to the text and partly supplies additional matter to the reader. A special feature is the large number of examples given at the end of almost every chapter or important division of a chapter."

Practical Essays. By ALEXANDER BAIN, LL.D., Emeritus Professor of Logic in the University of Aberdeen. London: Longmans, Green, 1884. Pp. xvi., 338.

Of the nine Essays collected under the present title—most of them reprints—three are of distinctively psychological or philosophical character: (1) "Common Errors on the Mind," (2) "Errors of Suppressed Correlatives," (5) "Metaphysics and Debating Societies"; but also several of the others, especially (7) "The Art of Study," may be regarded as studies in applied psychology.

The Theory of Morals. By PAUL JANET, Member of the Institute, Author of *Final Causes*, &c. Translated from the latest French Edition by MARY CHAPMAN. Edinburgh: Clark, 1884. Pp. x., 495.

The author's position in this comprehensive work, which appeared in the original about ten years ago, is described by himself as "a sort of rational eudaemonism, opposed on the one hand to utilitarian eudaemonism and on the other to the too abstract formalism of Kant's morality, yet at the same time reconciling the two". He has "attempted to follow the method which is called conciliatory, and which is simply eclecticism, properly defined". "Kant's morality should be retained in science; but it should rest upon the morality of Aristotle, which it ought not to cast aside; and in the reconciliation of these two systems, a noble and enlightened Utilitarianism, like that of J. S. Mill, should find full satisfaction."

Études philosophiques. Par F. DURAND DESORMEAUX. 2 vols. Paris : Alcan, 1884. Pp. xi., 461 ; 396.

Réflexions et Pensées. Par F. DURAND DESORMEAUX. Précédées d'une Notice sur la Vie, le Caractère et les Travaux de l'Auteur, par CHARLES YRIARTE. Paris : Alcan, 1884. Pp. 125.

Fernand Durand Desormeaux died of pulmonary disease in 1881 at the age of 41. Since 1867 he had been a legal functionary in the public service of his country, and in the last year or two, before his compulsory retirement through illness was speedily followed by a premature death, he had been advanced to a position in the ministry of justice which brought within his grasp the highest prizes of political ambition. But though he had all the qualities fitting and marking him out for political distinction, his heart from youth had been given to philosophical speculation and his highest aim was always to make his mark as a thinker. During all the years of his public employment he was sedulously, even feverishly, occupied in working out into clearness and setting down his ideas in view of the comprehensive theory of knowledge and conduct which he aimed at constructing. In the years 1877-8 he procured the leisure in which he could give himself more uninterruptedly to the work, and had he not again been drawn into the political current he might, even before his early fate, have gone far to accomplishing his design. To the last, at every spare moment, his mind continued to be given to his philosophic task, and it is in pursuance of his own wish or hope that his friends M. Yriarte and M. A. Espinas (who edits the two volumes of the *Études*) have now from the mass of his papers selected what they think will best show forth the manner of man he was and the scope of his thought. M. Yriarte's personal sketch, introductory to the *Réflexions*, is excellently traced ; and M. Espinas, confining himself mainly to the pieces written in the maturer years (from 1877), has with great pains and tact put together out of what seem mere fragments a fairly coherent philosophical view. Desormeaux was thoroughly imbued with the scientific spirit and in the pieces grouped together in Vol. i., under the general title of "Theory of Knowledge," is mainly concerned to re-lay the psychological basis for philosophical conclusions. In Vol. ii., "Theory of Action," he advances beyond psychological principles to moral and social applications. His psychology is throughout marked by originality and freshness of view ; in particular, he has a firm hold of the import of movement for the phenomena of intellect as well as volition. Had he lived to complete his work, it might have proved of lasting value. As they are, it is impossible to dip into these fragmentary discussions, so well arranged and furnished with titles by the editor, without pausing over their suggestiveness.

Les Problèmes de l'Esthétique contemporaine. Par M. GUYAU. Paris : Alcan, 1884. Pp. viii., 260.

"L'auteur, après avoir publié un volume sur la *Morale d'Epicure* et un autre sur la *Morale anglaise contemporaine* (dont il a été rendu compte ici même), aborde aujourd'hui l'esthétique. Partisan de l'évolution, il n'admet pourtant pas la théorie par laquelle M.M. Herbert Spencer et Grant Allen ramènent le plaisir du beau au plaisir du jeu ; selon lui, le plaisir esthétique est lié directement au développement même de la vie physique et mentale et n'exclut ni le sentiment de l'utile ni le désir ni même le besoin. Le principe de l'art, selon l'auteur, est dans la vie même ; l'art a donc le sérieux de la vie. 'L'objet de notre livre tout entier (dit-il), c'est d'établir ce caractère sérieux de l'art et de la poésie (1) das son

principe et son fond, (2) dans son développement futur, (3) dans sa forme même. Nous aurons donc à discuter l'antagonisme qu'on a voulu établir entre l'art et la démocratie, l'art et l'industrie moderne, l'art et l'esprit scientifique. Le but le plus haut de l'art, c'est, selon nous, de faire battre le cœur humain, et, le cœur étant le centre même de la vie, l'art doit se trouver mêlé à toute l'existence morale ou matérielle de l'humanité. Que restera-t-il un jour de nos diverses croyances religieuses et morales ? Peu de chose peut-être. Mais, si on nous demande ce qui restera des arts, de la musique, de la peinture, et particulièrement de cet art qui réunit en lui tous les autres et qui mérite d'être étudié à part, la poésie, nous croyons qu'on peut répondre hardiment :—tout, du moins tout ce qu'il y a de meilleur, de profond, et, encore une fois, de sérieux."

La Liberté et le Déterminisme. Par ALFRED FOUILLÉE. Deuxième édition, entièrement refondue et très augmentée. Paris : Alcan, 1884. Pp. viii, 367.

"Ce livre, présenté comme thèse à la Sorbonne il y a dix ans, donna lieu à une discussion passionnée dans le monde philosophique et même non philosophique. C'est un des travaux qui sont considérés comme ayant marqué la rénovation de la philosophie en France depuis une quinzaine d'années. Cette seconde édition, augmentée d'un tiers et entièrement refondue, est à vrai dire un livre nouveau. C'est tout un système de philosophie que l'auteur expose, à propos d'une question dont l'intérêt est toujours actuel :—Jusqu'à quel point le déterminisme scientifique est-il conciliable avec l'idée que nous nous faisons de notre liberté ? Jusqu'à quel point cette *idée même* de la liberté influe-t-elle sur nos actes ? N'entret-elle point comme facteur original dans le déterminisme scientifique même auquel elle imprime une direction nouvelle ? Telles sont les questions fondamentales que l'auteur examine. Il s'est proposé de rectifier et de transformer le *déterminisme* en y introduisant l'idée de liberté. Ce livre contient deux parties. La première est intitulée : 'Recherche d'une conciliation pratique et de ses limites. L'idée de liberté, moyen terme pratique entre le déterminisme et l'indéterminisme.' La deuxième partie est intitulée : 'Recherche d'une conciliation théorique et de ses limites.' Après un long examen du déterminisme et de l'indéterminisme sous leurs diverses formes, l'auteur entreprend la synthèse théorique des deux doctrines dans une série de chapitres dont voici les plus importants : (1) 'Force efficace de l'idée de liberté selon la théorie des idées-forces.' (2) 'Puissance efficace du *désir* de liberté. Liberté et sélection naturelle. Liberté et finalité immanente.' (3) 'Rôle de l'idée et du *désir* de liberté dans la formation de la connaissance, dans le sentiment du beau, dans l'amour d'autrui.' (4) 'Part de l'idée de liberté dans la conception de la moralité.' (5) 'Les antinomies de la responsabilité. La liberté est-elle conciliable avec le déterminisme dans la réalisation du bien et dans celle du mal ?'"

Essai sur le Génie dans l'Art. Par GABRIEL SÉAILLES, Ancien Élève de l'École normale, Professeur de Philosophie au Lycée Charlemagne. (Thèse présentée à la Faculté des Lettres de Paris.) Paris : Alcan, 1883. Pp. xii, 313.

"L'auteur ne se contente pas, comme on l'a trop fait jusqu'ici, de célébrer le génie en phrases poétiques. Il l'étudie dans ses origines et dans ses éléments. Le génie continue la vie ; il a, comme elle, et ses lois générales et sous sa forme la plus haute quelque chose d'individuel, d'imprévu, d'irréductible. Sans rien perdre de sa haute valeur et de sa singularité, le génie peut devenir ainsi l'objet d'une étude scientifique."

De l'Intelligence. Par H. TAINÉ, de l'Académie Française. 4me édition, corrigée et augmentée. Paris: Hachette, 1883. Pp. 419, 496.

M. Taine here preserves the form he gave to his work in the third edition (1878). The only notable additions in the body of the work, and these amounting altogether to some three pages, occur in the final Book dealing with General Knowledge. The chief of them is an interpolated sub-section (ii. pp. 376-9), which impresses the necessity of caution in interpreting the extension of the physical world according to our ideal construction of space: this sub-section now numbered viii. (turning the former viii. into ix.) is accurately indicated in the general Table of Contents at the end but not in the Summary at the head of the Chapter, p. 300. Otherwise, in the Preface, M. Taine extends by about two pages his reference (in the third edition) to the law of the conservation of energy as being a close approximation, if not an actual attainment, to the foundations of being. The law, he thinks, presupposes two conditions: (1) "Il y a dans les derniers éléments mobiles une ou plusieurs forces capables de devenir disponibles, attraction, répulsion, qui croissent à mesure que leur opposition fait décroître la force en exercice et qui la représentent tout entière sous forme de recette, après qu'elle a disparu sous forme de dépense." (2) "Il y a dans l'arrangement ou dans la nature des derniers éléments mobiles quelque particularité ou circonstance qui empêche l'équilibre universel et final de s'établir." "On peut considérer les deux conditions comme des moyens, et leur commun résultat comme un but, comme le but de la nature exprimé par une loi suprême . . . et ce but serait la persistance de l'énergie à travers la rénovation des effets." One remark, in the Preface, reproduced as it stood in the edition of 1879—that somnambulism and hypnotism are waiting to be investigated by experimenters of authority and critical ability—might have been modified in view of the excellent work done in this department within the last years.

Éléments de Physiologie générale. Par W. PREYER, Professeur de physiologie à l'Université d'Jéna. Traduit de l'Allemand avec l'autorisation de l'Auteur par JULES SOURY. ('Bibliothèque de Philosophie contemporaine.') Paris: Alcan, 1884. Pp. 314.

"Ce n'est pas une physiologie générale de plus ce livre; les problèmes les plus élevés de la vie y sont présentés de la façon la plus neuve et la plus philosophique. Le même temps que les anciennes conceptions dualistes du monde et de la vie se sont évanouies des esprits, l'idée de l'unité fondamentale de tous les phénomènes naturelles y a grandi; la matière n'est plus une masse inerte et inanimée; la vie devient une force naturelle qui, pas plus que les autres forces de l'univers, avec lesquelles elle se transforme, ne peut avoir commencé; la sensibilité et la pensée n'étant que des aspects de la vie sont des attributs également éternels et infinis de la substance. Le livre est aussi un manuel exact et précis des faits et des doctrines de la biologie actuelle."

Grundzüge der Ästhetik. Dictate aus den Vorlesungen von HERMANN LOTZE. Leipzig: Hirzel, 1884. Pp. 113.

Grundzüge der practischen Philosophie. Dictate, &c. 2te Auflage. Pp. 95.

The first of these pieces completes the series (eight Parts in all) of Lotze's paragraphs for dictation in lecture which Prof. E. Rehnisch began to issue in 1881. It falls into two main sections: the first dealing, in two chapters, with Beauty and Phantasy and with the Realisation and Kinds of the Beautiful; the second, in five chapters, with Music, Architecture,

Sculpture, Painting, Poetry. The paragraphs are given in the form to which they had been brought in the summer-session of 1856. [We are asked to correct a misprint that has unfortunately been left at p. 64, l. 14: for *Hass* read *Hast*.] In an Appendix (pp. 74-113), Prof. Rehnisch has conveniently brought together at the end of this Part the complete collection he has made of biographical materials (some of them already published separately in earlier Parts of the series). The collection includes, besides an admirable obituary memoir written at the time for the *National-Zeitung*, Lotze's leaving-certificates from gymnasium and university, a very careful catalogue of all his literary publications (brought up to date), and a complete record of his academic courses, at Leipsic, Göttingen and Berlin, from 1839 to 1881.

The second edition of the *Grundzüge der praktischen Philosophie* deserves mention, because the Editor has substituted an earlier draft (from the year 1878) for the one (of 1880) followed in the first edition. It is very instructive to note what different expression Lotze gave to his ideas at different times, expanding or contracting at particular points or otherwise modifying his dictation from year to year: every time he lectured on a subject he must have set himself anew to do his best for it. Prof. Rehnisch merits the warmest thanks for the labour undergone in preparing such varying editions,—as, we understand, he proposes to do more especially for those subjects which death prevented Lotze from treating finally in the projected Part iii. of his *System der Philosophie*. Thus the *Religionsphilosophie* will also presently appear in a varied second edition. The call for new editions of the different Parts of the series proves the hold that Lotze had gained upon his contemporaries: the *Psychologie*, first published of the series, is already about to appear in a third edition.

Ueber die Reize des Spiels. Von Dr. M. LAZARUS. Berlin: Dümmler, 1883. Pp. xvi., 177.

This psychological monograph on the attractions of Play (Games), after a discussion of the general aspects of the subject, treats successively of (1) Games of chance and intellectual games, (2) Gymnastics, (3) Spectacles (mainly artistic); and ends with a chapter of ethical appreciation. In the preface the author argues, with characteristic delicacy and force, for the possibility of psychological analysis without sacrifice of the fullness and richness of actual conscious experience. The monograph is worked out in the concrete or more popular style of which the author of *Das Leben der Seele* has already given so many effective specimens. Only one question—How the image of gain, though much rarer, prevails over the image of loss, though much more frequent, and hurries the player on to make his stake—seems to the author to involve such complex (though not doubtful) conditions that he leaves it over for special handling in a scientific journal.

Thomas Hobbes. Darstellung u. Kritik seiner philosophischen, staatsrechtlichen u. kirchenpolitischen Lehren, vom Standpunkte der modernen Weltanschauung. Von Dr. VAL. MAYER. Freiburg i. B.: Stoll u. Bader, 1884. Pp. 290.

The author of this monograph writes with a purpose—to champion the social-democratic cause of the present and future against the ultramontane-theocratic cause of the past and present, the one being connected with the advancing philosophy of "Immanence," the other with the retreating (but still vigorous) philosophy of "Transcendence." An exposition of Hobbes's views on Logic and Metaphysics, on Man and on the State (pp. 1-90) is

followed, in the remainder of the volume, by a criticism (often forcible) which gives the opportunity of pointing the assertion of the author's own opinions both where Hobbes, in the boldness of his thought, makes approach to them in the 17th century and where he hangs back under the influence of his theistic conceptions. The author is content to follow the Amsterdam (1668) collected edition of the Latin works and does not pretend to throw new light on the philosopher: also, the page of biographical Introduction might have been more exact.

Einleitende Bemerkungen zu einer Untersuchung über den Wert der Naturphilosophie des Epicur. Von Dr. P. v. GIŻYCKI. (Wissenschaftliche Beilage zum Programm des städtischen Gymnasiums zu Berlin.) Berlin: Gäertner, 1884. Pp. 26.

"The author seeks to show, by reference to Hegel, Ritter and Zeller, with what animosity the philosophy of Epicurus has been judged even to the present day, and urges the necessity of leaving aside all considerations of praise or blame in the exposition of philosophical systems. If there is to be express critical appreciation, it should be kept strictly apart from the exposition; but the best way of judging of the worth of any doctrine is to give an objective account of its development and influence."

Powstanie i Rozwój Pesymizmu w Indjach. [Origin and Development of Pessimism in India.] By M. STRASZEWSKI, Professor of Philosophy in the University of Cracow. Cracow: Anczyca i Spółki, 1884. Pp. 101.

The author is engaged upon an extensive work dealing with the History of Philosophy in general and hopes soon to publish his first volume, devoted specially to Oriental Philosophy. Being appointed to represent his university at the recent tercentenary celebration of the founding of the University of Edinburgh, he brings the present extract from his coming volume as a complimentary offering to the Edinburgh academic authorities. The natural and social, more particularly the psychological, conditions that led to the development of Indian Pessimism, in Brahmanistic as well as Buddhistic form, are set forth at length in the light of the latest researches, and the analogies with the case of modern German Pessimism are expressly traced. Prof. Straszewski is a man of great philosophical enthusiasm and specially fitted by the breadth of his interests and acquirements to bring his Polish countrymen into contact with the general European movement of thought.

Other Books, &c., received :—

- M. Guthrie, *On Mr. Spencer's Data of Ethics*, London: The Modern Press, pp. 122. [See MIND XXXIII., 162.]
 A Disciple of Buckle, *The New Atlantis: or Ideals Old and New*, London: Williams & Norgate, pp. 208.
 A. Tebaldi, *Ragione e Pazzia*, Milano: Hoepli, pp. 220.
 G. Cesca, *Storia e Dottrina del Criticismo*, Verona e Padova: Drucker e Tedeschi, pp. 260.
 A. Mähry, *Kritik u. kurze Darlegung der exacten Naturphilosophie*, 5te Auflage (1882), Göttingen: Vandenhoeck u. Ruprecht, pp. 287.
 W. Preyer, *Specielle Physiologie des Embryo*, 2te Lief., Leipzig: Grieben, pp. 161-320 (mit Tafeln).

VII.—MISCELLANEOUS.

Dr. G. J. Romanes sends the following :—

I should like to make a few explanations in reply to those parts of Mr. Whittaker's review, in MIND XXXIV., of my recently published work, *Mental Evolution in Animals*, which are of a critical nature.

Touching my definition of Instinct, it is enough to say that I recognise the validity of his criticism. Instead of saying that 'instinct is reflex action into which there is imported the element of consciousness,' I ought in this passage to have defined my view more closely and substituted for the word 'consciousness' the word 'perception'. But, as Mr. Whittaker virtually shows, my meaning in this matter was not left obscure; for, as he observes, "This is now explained to mean that, while 'a stimulus which evokes a reflex action is at most a sensation,' on the other hand, 'a stimulus which evokes an instinctive action is a perception'".

In Mr. Whittaker's opinion my "treatment of the fundamental question of the relation of Mind and Body can hardly be described as satisfactory". This, perhaps, is scarcely surprising, in view of the fact that I do not treat of this question at all. Originally I had written a long chapter upon it, which was intended to succeed the chapter on 'The Physical Basis of Mind'. This, however, I afterwards published as a separate essay in *The Nineteenth Century*. In that essay 'the opposition between subject and object' was stated with so much emphasis that in subsequent parts of the book I did not recur to the matter. After having withdrawn this chapter from the book, however, it might perhaps have been better if I had quoted portions of it instead of having merely referred to it in a foot-note. Nevertheless, if my reviewer had consulted the reference, I do not think he could have supposed that I experience any dimness of vision upon this topic. Still less could he have supposed that I "appear to think that the occurrence of consciousness is somehow explained if it can be shown to arise when there is an increase in the time taken up by the transmission of a stimulus". Indeed, I cannot understand how any reader of my book, even in the absence of the chapter on 'Mind and Body,' could place this interpretation upon any of its passages. I have merely stated the observable and demonstrable fact that consciousness only arises when there is a comparative delay in the essential response of a nerve-centre to a stimulus. I have nowhere insinuated that this fact serves to convey any explanation of the occurrence of consciousness.

The only remaining criticism which I have to notice is that which has reference to my diagrammatic representation of the probable course of mental evolution. My critic observes :—"The branching structure can only represent the division of a single mind at each of its stages into faculties, not the divergence of different types of mind. Nothing is said as to the possibility that at the same level of general intelligence there may be essentially different mental types—dependent, for example, on different degrees of acuteness of the senses, and different ratios of their degrees of acuteness to one another. . . . The evolution of existing types of animal intelligence, as well as existing types of animal organisation, ought to be shown by a genealogical tree." Now, I do not dispute that it would be desirable to form such a genealogical tree of existing types of animal intelligence, if the formation of such a tree were in the nature of the case possible. But I do not consider that in the nature of the case this is possible. Our means of investigation in comparative psychology being

necessarily indirect or 'ejective,' we can never aim at any such precise classification of animal minds as we can of animal bodies. The most that we can ever hope to achieve is to indicate in the zoological scale where this or that faculty of mind first gives definite evidence of its appearance. And this is all that I have attempted to achieve.

I regret that Mr. Whittaker has not alluded to my views on the origin of Memory as precedent to the association of ideas, and on the origin of Reason in the unconscious inferences of perception. I regret this because I had looked forward to the review of my book in *MIND* as the one which would probably have discussed these views.

The Croonian Lectures were delivered in March of this year, at the Royal College of Physicians, by Dr. J. Hughlings Jackson, who chose for his subject the "Evolution and Dissolution of the Nervous System," and gave what may be regarded as a highly-condensed summary of the results of the work that has occupied him for many years. At frequent intervals Dr. Jackson has published, in somewhat fragmentary form, the results that he has arrived at in localised districts of his field of work; but these publications have been distributed over so long a period and disseminated in so many journals that they are not readily available for reference. These lectures are therefore welcome as a recapitulation in an accessible form of much that has appeared before; as giving the latest outcome of Dr. Jackson's labours; and as presenting his views in a more unified or, as he might himself term it, integrated form than they have yet assumed. Dr. Jackson regards the central nervous system as a hierarchy; in which each grade controls the grade below and is controlled by the grade above; each grade represents over again and co-ordinates in more elaborate combinations the parts represented and co-ordinated by the grade below; and every part or region or centre of a grade represents a larger share of the organism than any corresponding part of the grade below, a more limited share than any corresponding part of the grade above. Thus each centre in the lowest grade represents but a limited portion of the organism, and each centre in the highest grade represents the whole of the organism, but in no two of these latter centres is the whole organism represented in quite the same way. The whole of the grades are grouped in three main divisions—lowest, middle, and highest centres. Of these the lowest are the most completely organised, the highest the least completely organised. When disease attacks the nervous system there are always two sets of manifestations: negative and positive—loss of function and excess of function. The functions lost are those of the centres diseased. The functions that are excessive are those of healthy centres subordinate to the centres diseased, and permitted to act excessively by the removal of the control normally exercised by the centres now diseased. The centre whose function is abolished may belong to the lowest, to the middle, or to the highest division, affording examples of local dissolution. On the other hand there may be a uniform dissolution, the whole of the highest grade of all being first lost, and successive grades being pared off as it were, as if in layers. Dr. Jackson applies these doctrines, with many subsidiary hypotheses, to every kind of nervous disorder, from atrophy of muscles to insanity, and from giddiness to coma; and from his vast knowledge of diseases of the nervous system he is able to supply an apparently limitless profusion of instances to every section and subsection of his subject. A more extended account of these important lectures is reserved to a future occasion. [C. M.]

At the meeting of the Aristotelian Society on March 17th, the study of Hume's *Treatise of Human Nature* was continued by a paper on Book i.,

Part 4, "Of the Sceptical and Other Systems of Philosophy," by Mr. W. R. Browne; on March 31st, by a paper on Book ii., Part 1, "Of Pride and Humility," and Part 2, "Of Love and Hatred," by Mr. W. E. Beeton; on April 21st, by a paper on Book ii., Part 3, "Of the Will and direct Passions," and Book iii., Part 1, "Of Virtue and Vice in general," by Mr. P. Daphne; and concluded on May 19th, by a paper on Book iii., Part 2, "Of Justice and Injustice," and Part 3, "Of the other Virtues and Vices," by Mr. G. Cave. The papers were in every instance followed by a discussion. On May 19th, Professor Bain, who was present, made some interesting observations on Hume's relation to Utilitarianism, as well as on the relation of the speculative part of Hume's own system to the practical part. On one of the two meetings devoted to original communications, May 5th, a paper was read by Mr. W. R. Dunstan, Vice-president, on "An Analysis of Force," and on June 9th, Mr. E. Hawksley Rhodes, Vice-president, completed the subject of Hume by a paper on "Hume's position in the English School of Philosophy"; both papers being followed by a discussion.

The English Translation of Lotze's *Mikrokosmos*, begun by the late Miss Elizabeth Hamilton (daughter of Sir W. Hamilton) and completed by Miss E. E. Constance Jones (of Girton College), who has also revised Miss Hamilton's part of the work, is now being printed, and will be published by Messrs. T. & T. Clark of Edinburgh. It may here be added, with reference to the English translation of Lotze's *Metaphysik* noticed on a former page, that a French translation of the same work has also lately appeared, published by Firmin-Didot at the cost of the translator Mons. A. Duval, now of Montpellier. Prof. Rehnisch, noticing M. Duval's work in the *Göttinger Gelehrte Anzeigen* (No. 10, 1884), mentions that Lotze himself revised it, and that it has consequently been found useful in clearing up difficulties at particular points of the newly issued second edition of the German original. M. Duval has also ready a translation of the *Mikrokosmos*, executed at Göttingen under the author's eye while Lotze was still there, cannot find a publisher willing to undertake the cost of production.

The Rev. Dr. John Gibson Macvicar, author of *An Inquiry into Human Nature* (1852), *The Philosophy of the Beautiful* (1855, first published in a less developed form, in 1837, with the title *On the Beautiful, the Picturesque, and the Sublime*), *A Sketch of a Philosophy* (1868), and contributor of an article on "The so-called Antinomy of Reason" to MIND VI., died on the 12th February at Moffat, N.B., where he had been parish-minister since 1853. He was born at Dundee on 16th March, 1800.

Dr. G. Stanley Hall, who has for some time been Lecturer (not Professor, as formerly stated in MIND) at the Johns Hopkins University, Baltimore, has now been appointed full Professor of Psychology and Pedagogy (the latter subject being understood as Applied Psychology and Ethics). He is to have several Assistants in his work, and his own lecturing will be confined to graduates. With its Psycho-physical Laboratory, which has begun already to yield results, as our readers have seen in No. XXXIII., and from which more may be soon expected, the Johns Hopkins is now as well fitted out for scientific work on mind as perhaps even the most advanced German university. In this country, almost the first beginning towards such an academic equipment has yet to be made.

Dr. J. G. Schurman, who has hitherto professed English Literature with Metaphysics in Dalhousie College, Halifax, N.S., has now been appointed to a newly-founded separate chair of Metaphysics there.

Professor Benno Erdmann has passed from Kiel to Breslau; Drs. A. Krohn and G. Glogau, *extraordinarii* at Halle, have become ordinary Professors at Kiel; and Dr. H. Vaihinger, from the extraordinary grade at Strasburg, has risen to the higher grade at Halle.

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. XVII. No. 4. W. T. Harris—Philosophy in Outline (ii.). Trentowski—On the Sources and Faculties of Cognition (trans.). D. J. Snider—A Study of the *Iliad*. G. Garrigues—Goethe's *Das Mährchen*. F. B. Sanborn—The Puritanic Philosophy and Jonathan Edwards. R. G. Hazard—Man's Freedom in his Moral Nature. Notes and Discussions, &c.

REVUE PHILOSOPHIQUE.—IXme Année, No. 4. B. Perez—La logique de l'enfant (de trois à sept ans). A. Binet—L'hallucination. i. Recherches théoriques. J. Andrade—De l'abus du principe de la conservation de la force. Rev. générale (P. Tannery—Théorie de la connaissance mathématique: Cohen, Du Bois-Reymond, Kroman). Analyses et Comptes-rendus (H. Maudsley, *Body and Will*, &c.). Rev. des Périod. Variétés (Ch. Richet—De la suggestion dans le rêve). No. 5. A. Binet—L'hallucination. ii. Recherches expérimentales. L. Manouvrier—La fonction psycho-motrice (i). F. Paulhan—La morale idéale. Analyses, &c. Notices bibliographiques. Rev. des Périod. Correspondance (A. Stöhr). No. 6. Ch. Féré—Des troubles de l'usage des signes. G. Tarde—Darwinisme naturel et Darwinisme social. L. Manouvrier—La fonction psycho-motrice (fin). Analyses, &c. Rev. des Périod.

LA CRITIQUE PHILOSOPHIQUE.—XIIIme Année, Nos. 1-21. C. Renouvier—La doctrine de l'immortalité conditionnelle (1, 4); J. J. Rousseau jugé par les Genevois d'aujourd'hui (7); Le caractère de Rousseau (10); Les crises morales de Rousseau (11); Les labyrinthes de la métaphysique (13, 16, 19, 21). F. Pillon—*La Philosophie positive* (1); A propos de la notion de nombre (5, 6); *L'Utilitarisme*, par J. S. Mill (17). A. Schloesing—Des bases de l'éducation religieuse (2). L. Dauriac—Déterminisme et prédéterminisme (3); Les deux morales: La morale évolutionniste et la morale traditionnelle (8).

LA FILOSOFIA DELLE SCUOLE ITALIANE.—Vol. XXIX., Disp. 1. P. Ragnisco—La teleologia nella filosofia greca. T. Mamiani—La morale di Socrate. T. M.—Testamento di un metafisico (ii.). T. Ronconi—Lettera a T. Mamiani intorno allo studio della filosofia in Londra (i.). A. Chiappelli—Sopra l'eglegia di Aristotele ad Eudemo. Bibliografia, &c. Disp. 2. P. Ragnisco—La teleologia nella filosofia moderna. A. Macchia—Lettera quarta ad uno studente di Università. T. Mamiani—Della imputabilità umana. T. Ronconi—Lettera a T. M. intorno, &c (ii.). T. M.—Testamento, &c. (iii.). P. D'Ercole—Un manoscritto inedito di E. Kant. C. Cantoni—Werner, *Kant in Italien*. L. Ferri—Il Platonismo di Marsilio Ficino. Bibliografia, &c.

ZEITSCHRIFT FÜR VÖLKERPSYCHOLOGIE U. SPRACHWISSENSCHAFT.—Bd. XV., Heft 1, 2. M. Holzmann—Sünde u. Sühne in den Rigvedahymnen u. den Psalmern. G. Simmel—Dantes Psychologie (i.). E. Wohlwill—Die Entdeckung des Beharrungsgesetzes (ii.). Guggenheim—Zur Composition der platonischen *Republik* in ihrem Verhältnisse zur Entwicklung der platonischen Ethik. Beurteilungen (C. Abel, *Hechter Lectures on Comparative Lexicography*, &c.). G. Vogrinz—Ueber die Casustheorie.

PHILOSOPHISCHE MONATSHEFTE.—Bd. XX., Heft 4, 5. C. Schaarschmidt—Zur Widerlegung des Determinismus. J. Nathan—Vorstellen, Fühlen, Wollen. E. König—Einige Gedanken für Kant's Aesthetik gegen Empirismus u. Realismus. Recensionen, &c. (J. Martineau—*A Study of Spinoza*, &c.) Literaturbericht. Bibliographie, &c.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. VIII., Heft 2. W. Schuppe—Zum Eudämonismus. A. Marty—Ueber subjectlose Sätze u. das Verhältniss der Grammatik zu Logik u. Psychologie (ii.). G. Heymans—Zurechnung u. Vergeltung. Eine psychologisch-ethische Untersuchung (iii.). Anzeigen. Selbstanzeigen. &c.